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# NATIONAL INTELLIGENCE SURVEY

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South Africa

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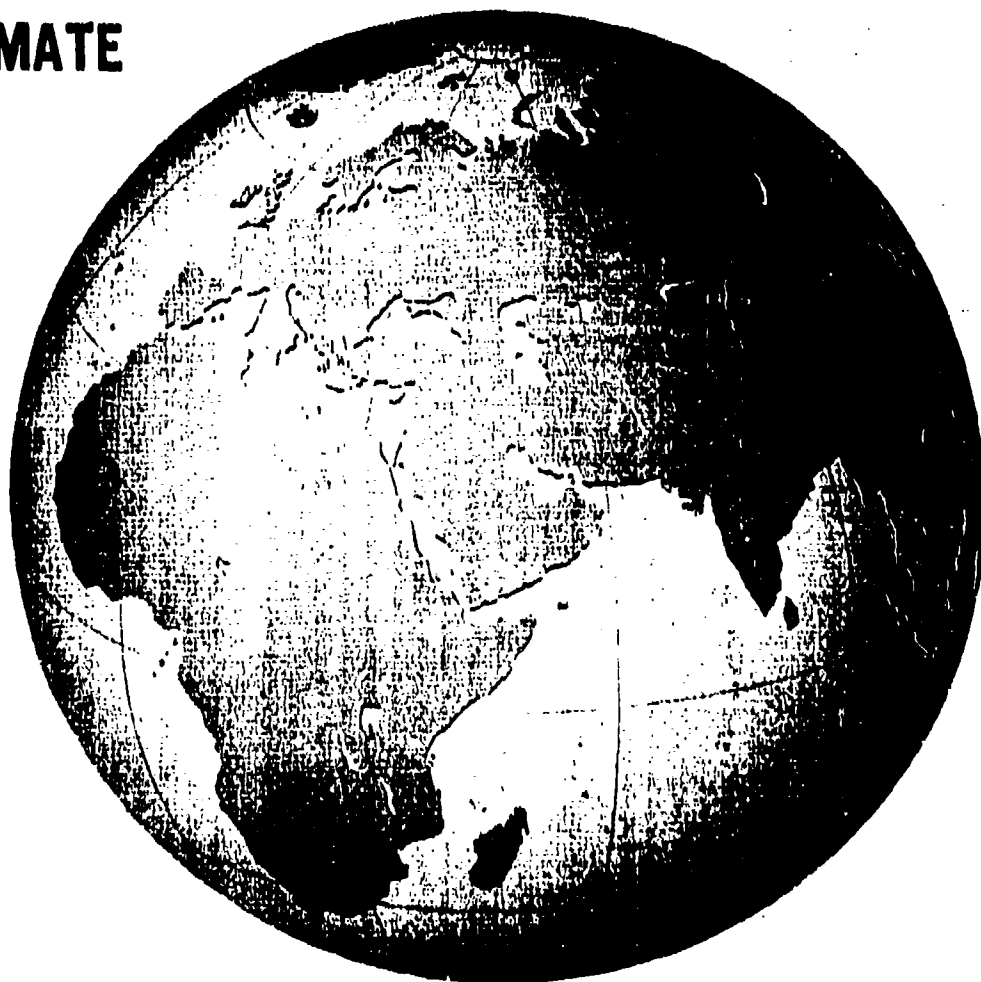
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WEATHER and CLIMATE

Section 23

JANUARY 1972

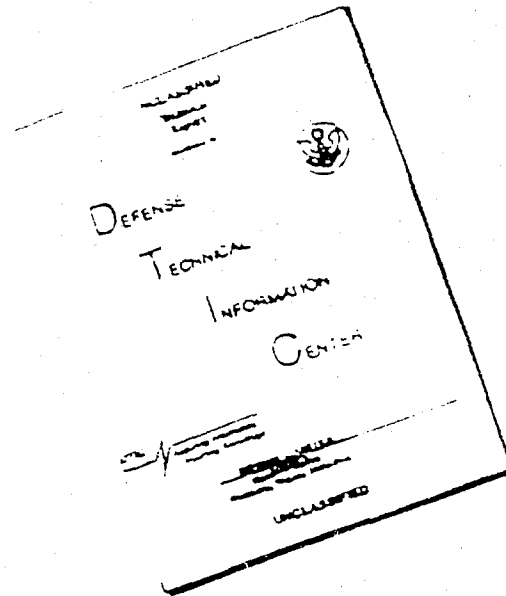


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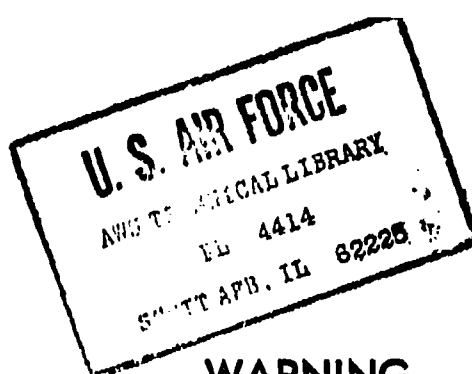


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*This section was prepared for the NIS by the  
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# Weather and Climate<sup>1</sup>

## A. General weather and climate

The climate of South Africa<sup>2</sup> is predominantly tropical and subtropical but is tempered by generally high elevation. Arid conditions prevail on the west coast, but precipitation increases to substantial amounts in the east. Distinct wet and dry periods are experienced throughout most of South Africa. The climate is controlled principally by the general circulation that results from the interaction between year-round high pressure over the adjoining oceans and seasonally changing pressure over the southern part of Africa. During summer (December through February) mean pressure is relatively low over land, and the influx of moist air is frequent. This is the season of maximum precipitation and cloudiness except in the extreme west and southwest, where the prevailing influence of high pressure centered over the Atlantic Ocean brings fine weather. In winter (June through August) mean pressure is relatively high over land, and the weather is usually pleasant and dry in most sections. However, surges of polar air from the cold ocean areas to the south regularly affect the extreme southwest and south coastal sections during winter and bring cold, damp, cloudy, and occasionally stormy weather.

Temperatures are moderate along most of the coastline throughout the year, ranging from mean daily maximums mostly in the 70's (°F.) during summer to mean daily minimums in the 40's and 50's during winter. In the interior, seasonal temperature extremes are more commonplace; mean daily maximums are over 80°F. on much of the plateau in summer, and mean daily minimums are in the 20's at high elevations in the east in winter. Relative humidity is consistently high along the coasts all year. It decreases toward the interior, where it is highest in summer and lowest in winter. Mean annual precipitation ranges from less than 5 inches on the west coast to 40 inches or more in the east, where mean monthly amounts in summer exceed 6 inches on the high slopes that are well exposed to the moist flow. Precipitation falls mostly as rain, but snow occasionally falls during winter at high elevations in the south and southeast. Skies are usually cloudy or partly cloudy in portions of the north and east during summer, but elsewhere sunshine is abundant. Clear skies prevail everywhere in winter except in southwest coastal areas.

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<sup>2</sup>In this section the term "South Africa" refers to the entire NIS Area, which includes Botswana, Lesotho, the Republic of South Africa, South-West Africa, and Swaziland.

Low ceilings are most frequent in coastal sections and inland in the east to the top of the Drakensberg range. Throughout the year along the west coast, low stratus and fog frequently drift inland from over the cool ocean during the night, but it normally dissipates by afternoon. Visibility is generally good all year. It is most restricted at times along the west coast and in the eastern highlands by fog. Also, low clouds sometimes obstruct visibility on mountain slopes in the extreme southwest and south and in the east, particularly along the Drakensberg range. Thunderstorms are rare along the west and southwest coasts but occur frequently in the eastern highlands and in northern portions of the plateau, where they occur on more than 75 days annually and reach a maximum during summer. Although rare, tornadoes have been known to accompany thunderstorms, mostly in the eastern highlands. Surface winds are mostly light and variable in the interior but are stronger along the coasts, where they occasionally reach gale force ( $> 27$  knots).

South Africa, roughly triangular in shape, occupies the southernmost portion of the African continent, extending from about 17°S. to 35°S., with the easternmost point near 33°E. on the Indian Ocean coastline and the westernmost point near 12°E. on the Atlantic Ocean coastline. The main physical feature of South Africa is an interior plateau. It consists of an extensive high plain that culminates in rugged hills and mountains along the eastern, southern, and western perimeters. The plain generally ranges between 3,000 and 4,000 feet above sea level, and a few mountain peaks are over 10,000 feet in the southeast. There is a more or less abrupt fall from the mountains to the coast, some places in the form of terraces. A narrow belt of low plains parallels the west coast, and discontinuous plains follow the remaining coastline; plain elevations are generally less than 500 feet on the west coast and less than 1,000 feet on the south and east coasts. The following seasonal breakdown is used throughout this section: summer (December through February), autumn (March through May), winter (June through August), and spring (September through November).

## B. Climatic controls

The primary factors determining the climate of South Africa are the semipermanent pressure systems that produce the large-scale atmospheric airflow patterns, a variety of air masses, migratory pressure systems and fronts, the topography of South Africa, and the nearby oceans.

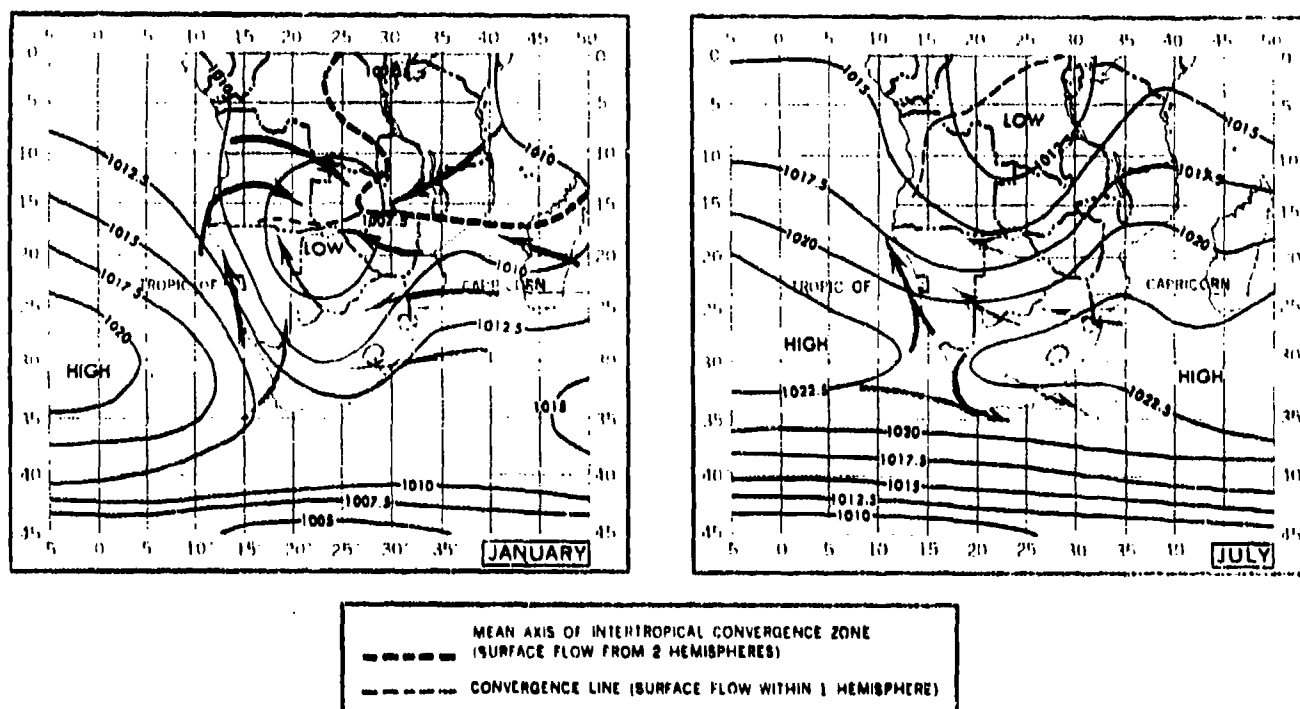


FIGURE 1. Mean sea-level pressure (millibars) and generalized surface airflow, January and July

### 1. General circulation and air masses

a. MAJOR SEMIPERMANENT PRESSURE SYSTEMS—Mean charts show high-pressure centers in the South Atlantic and Indian Oceans throughout the year (Figure 1). Mean pressure over land, however, is more subject to seasonal alterations because of the seasonal movement of thermal low pressure over the southern part of Africa.

During summer the thermal low is furthest south and is centered over the northern border of South Africa, with a trough extending to the southern coast of Africa. The Indian Ocean high is quite removed from the east coast, but the South Atlantic high extends to the west coast. Both highs are weakest and located farthest south in summer, with a weak ridge of high pressure extending between them along the south coast. Mean pressure decreases rapidly toward the subpolar ocean areas, where cyclonic activity is frequent. In response to this mean pressure distribution of summer, moist tropical and subtropical air from the ocean highs flows toward the interior of southern Africa. The flow from the relatively warm Indian Ocean has a long overwater trajectory around the northern periphery of the high and reaches South Africa as moist, unstable air. This airflow produces cloudiness and rain over much of the Area, but in decreasing amounts from east to west across the plateau. The moist airflow from the South Atlantic high recurves inland and reaches South Africa by way of land areas to the north. Initially, it is quite stable along the west coast of South Africa because of strong subsidence aloft and a relatively short trajectory over cool coastal waters. For this reason very little rainfall occurs over west coastal sections of South Africa. However, as the air continues

northward before turning inland it is gradually warmed over warmer waters, subsidence decreases, and the moisture content increases. As a result it produces considerable cloudiness and rain after turning inland. This circulation is normally confined to the area north of South Africa and is bounded by a hemispheric convergence zone separating it from a drier circulation over the interior of South Africa. However, occasionally during summer the convergence zone moves southward, and the moist, unstable air reaches northern sections of the South African plateau.

By winter the thermal low moves to its northernmost position and is replaced across South Africa by a ridge of high pressure that extends between the South Atlantic and Indian Ocean highs. The two high-pressure cells are at maximum intensity and displaced slightly northward of their mean summer positions. The Indian Ocean high is centered much closer to South Africa during winter, but the South Atlantic high varies very little from its summer position relative to the coastline. The steep pressure gradient that has remained south of the continent in summer is displaced northward in harmony with the northward movement of the two ocean highs. As a consequence, the winter circulations are predominantly anticyclonic, and cloud and precipitation amounts reach a minimum in most of the Area. Over the plateau the airflows originate within areas of relatively high pressure and are quite dry. Circulation from the Indian Ocean is more stable than during summer and causes appreciable precipitation only in some extreme eastern sections. The airflow from the South Atlantic high affecting the west coastal sections continues into winter as a stable, rain-



inhibiting flow. Low-pressure systems embedded in the westerly circulation to the south of the continent pass nearer to South Africa during winter. As a result, relatively cold, damp airflows from the higher latitudes regularly affect extreme southwestern and southern positions, and these regions experience greater winter cloud amounts than the rest of South Africa and a winter maximum of precipitation.

b. AIR MASSES.—Tropical maritime air masses from the Indian Ocean are a major contributor to the summer rains in much of South Africa. This air has accumulated a deep layer of moisture and is convectively unstable upon reaching South Africa. Orographic lifting over the eastern highlands and convection caused by surface heating effectively release this instability. Cloud and precipitation amounts are substantial in the east, and summer showers and thunderstorms are frequent. The moist air from the Indian Ocean sometimes penetrates to western portions of the plateau during the warmer months of the year, but it is considerably modified. Attendant rainfall, cloud cover, and humidity decrease significantly westward across the plateau. During winter air masses from the Indian Ocean are more stable because of the generally greater proximity and intensity of the high-pressure area. As a rule, moisture is distributed through a more shallow layer during winter; rain occasionally falls in east coastal sections and along the eastern slopes of the Drakensberg range, but sufficient moisture for precipitation seldom penetrates further inland. Tropical maritime air originating in the South Atlantic high influences the west coast throughout the year. Although this air mass is moist near the surface, the stabilizing influences of higher level subsidence and cool coastal waters tend to suppress convection and rainmaking processes and foster the formation of fog and low stratus along the immediate coast. Also, temperatures along the coast are quite low for the latitude, particularly during summer. This stable air prevails over extreme southwest portions of South Africa during summer.

During summer warm and humid equatorial air occasionally moves south over northern portions of the plateau and is mainly responsible for a summer maximum of humidity, cloudiness, precipitation, and thunderstorms in this region of South Africa.

Continental air masses form over the plateau during winter under predominantly anticyclonic conditions. This very dry and stable air is quite persistent on the plateau but is less frequent in the coastal areas. Virtually clear but hazy skies permit bright sunshine with pleasant afternoon temperatures, but after sunset terrestrial radiation causes nighttime temperatures to drop significantly. At high elevations across the more southern latitudes, temperatures are frequently below freezing by morning. Although dry continental air is most dominant during winter, it is not limited to this time of year but also occurs on the plateau during summer between intrusions of humid maritime or equatorial air. In the southwest portion of the plateau, it is the most frequent type of air mass even in summer and contributes to the very hot and dry summers of this region.

Polar maritime air masses from the vast ocean areas to the south regularly move into South Africa during winter. These cold outbursts have a long over-water passage and are generally quite moist and unstable. They bring precipitation, cloudiness, and occasionally strong southwest winds mostly to coastal sections of the extreme southwestern and southern parts of South Africa and are responsible for a winter maximum of precipitation in those areas. Orographic precipitation associated with these air masses is frequent and heavy in the coastal mountains of the extreme southwest. Occasionally, when the polar air is sufficiently cold, snow may fall at high elevations in the southern and southeastern sections. Sometimes the cold air is deep enough to advance onto the plateau, bringing abnormally low temperatures and some cloudiness, but most of the precipitation falls over the coastal mountains and along the southern escarpment. Incursions of polar maritime air are less frequent during summer and are generally confined to coastal sections of the southwest and south, where they occasionally interrupt the otherwise fine summer weather.

## 2. Migratory pressure systems and fronts

During winter the northern limit of cyclonic activity is near South Africa; low-pressure systems are embedded in the westerly circulation that prevails over the oceans south of the continent, and they move in a general west-to-east direction. Their attendant cold fronts mark the leading edge of the southwest flow of cold, moist air that is drawn northward by the circulation of the cyclonic systems. The extreme southwest and south coastal sections are regularly subject to cold fronts. The importance of frontal activity as a source of precipitation in these parts is reflected by the distinct winter maximum at many places. Stormy weather associated with the cyclonic activity of winter sometimes occurs along the southwestern and southern coasts. Cold fronts pass with decreasing frequency as the distance increases northward and are rarely experienced over the extreme north. During summer, cyclonic activity generally occurs at more southern latitudes than during winter. Consequently, summer frontal activity in South Africa is generally confined to infrequent occurrences along the southwest and south coasts.

Each cold frontal passage is usually followed by an anticyclone, which generally moves from west to east. With the advent of high pressure, temperatures may remain colder than normal, and a moist onshore circulation may linger mostly near the coasts. However, with the passage of a high there is usually a gradual return to warmer and drier weather.

## 3. Topography

The extensive plateau and its peripheral mountain ranges exert a significant influence on the climate of South Africa. The influences of moist air originating over the surrounding oceans are minimized by these mountain ranges. The orographic lift provided increases precipitation amounts considerably along the southern

and eastern ranges, particularly on the seaward-facing slopes. As a result the air arriving over the interior of the plateau is much drier. Although most of South Africa is located within the tropics and subtropics, the highlands, which mark the perimeter of the plateau, cause temperatures to be lower than normally expected at those latitudes. In fact, the variety of relief, elevation, and exposure to airflows in the mountainous areas results in many local variations to the general regional climates. The extensive areas of rather barren plains on the plateau are conducive to intense daytime heating and nocturnal radiation in the somewhat rarefied atmosphere, particularly during winter when the air is dry and cloud amounts are minimal. Thus, winter afternoons may be warm, but after sunset the air cools rapidly.

#### 4. Oceans

In all the coastal lowland areas, diurnal and annual temperature ranges are fairly small because of the tempering influence of the oceans, and humidity is consistently high. An important effect of the vast ocean areas to the south of the continent is to moderate air masses originating in the polar regions. For example, the coastal lowlands of the southwest and south are fairly often exposed directly to polar air masses during winter, but freezing temperatures rarely occur. The desert conditions along the west coast are partially caused by the stabilizing influence of the cool *Benguela Current* on air passing over it. Extensive layers of low stratus clouds and fog form along the coast, but almost no rain falls. The Benguela Current originates in coastal upwelling of relatively cold water and flows northward along the entire length of the west coast. Temperatures along the immediate coast are much lower than would be expected for the latitude, particularly during summer. The large temperature differential between the cool offshore waters and the hot desert air further inland leads to the development of very pronounced and strong daytime sea breezes during the warmer part of the year. The east coast is influenced by the warm southward-flowing *Agulhas Current*, and temperatures there are in marked contrast to those along the west coast. Also, unlike the Benguela Current, the warm Agulhas Current enhances or at least sustains, the general instability of Indian Ocean air masses, thereby contributing to the relatively substantial precipitation amounts in eastern portions of South Africa.

### C. Weather elements and climatic conditions

#### 1. Temperature

a. SURFACE.—Summer and winter temperatures are not so much in contrast in the coastal lowlands as they are on the plateau (Figures 2, 25, and 26). Along the coasts, where temperature is most conservative because of the moderating influence of the oceans, the annual ranges of both mean daily maximum temperatures and mean daily minimum temperatures are small, generally 15 Fahrenheit degrees or less. On the plateau, however, where the continental influence is greatest, the annual range of mean daily maximum temperature and mean

daily minimum temperature is larger, generally 15 to 30 degrees. Also, extremes of temperature are not as commonplace along the coasts as on the plateau. Throughout the year the diurnal range of temperature at any particular location in South Africa is comparable to or greater than the annual ranges of both mean daily maximum temperatures and mean daily minimum temperatures. Along the coasts mean daily maximum temperatures are mostly 10 to 25 degrees higher in all months than mean daily minimum temperatures. On the plateau the diurnal range is much larger, 20 to 40 degrees, with the largest values generally experienced during the dry, relatively cloud-free winter months.

Summer afternoons are hot except along the coasts and at high elevations, particularly in the east where relatively large amounts of cloud reduce insolation. In January, the midmonth of summer, mean daily maximum temperatures are mostly in the 80's and 90's except along the coasts and in parts of the eastern highlands, where they are usually in the 70's (Figure 3). Although the highest mean daily maximum temperatures occur in summer in most of South Africa, there is a pronounced exception. At tropical latitudes across most of the plateau average afternoon temperatures are highest in midspring, when the sun is almost directly overhead and afternoon cloud amounts are still relatively small. Unlike the afternoons, early morning temperatures are highest in summer everywhere. Mean daily minimum temperatures in January are in the 60's, but along the west coast and at high elevations in the south and east they are mostly in the 50's.

Winter mornings are fairly cold at some places, but afternoons are usually mild or even warm almost everywhere. Mean daily minimum temperatures in July, the midmonth of winter, are in the 30's and 40's except in portions of the eastern highlands, where they are in the 20's, and along the northwest coast and in the eastern lowlands, where they are in the 50's. Mean daily maximum temperatures in July are in the 60's and 70's except at high elevations in the south and east, where they are mostly in the 50's.

Extreme temperatures range from 118°F. at Goodhouse in the western Orange River valley to 9°F. at Standerton and Wepener in the eastern highlands (Figures 27 and 28). Temperatures in the 100's have been recorded everywhere in summer except at some high elevations and at a few locations on the coasts. Abnormally high temperatures along the coasts are often attributed to hot, dry *berg winds* blowing off the plateau. They sometimes produce the highest temperatures of the year in winter along the normally cool west and southwest coasts. Absolute minimum temperatures between 10°F. and 20°F. have been registered in much of the eastern and southern highlands and on most of the plateau south of about the 21st parallel, increasing to the 20's and 30's northward and toward the coasts. Temperatures as low as 32°F. have occurred in summer at Quchas Nek, 6,470 feet high in the mountains of Lesotho, and at Middelburg, 4,167 feet high in the southern highlands. It is likely,

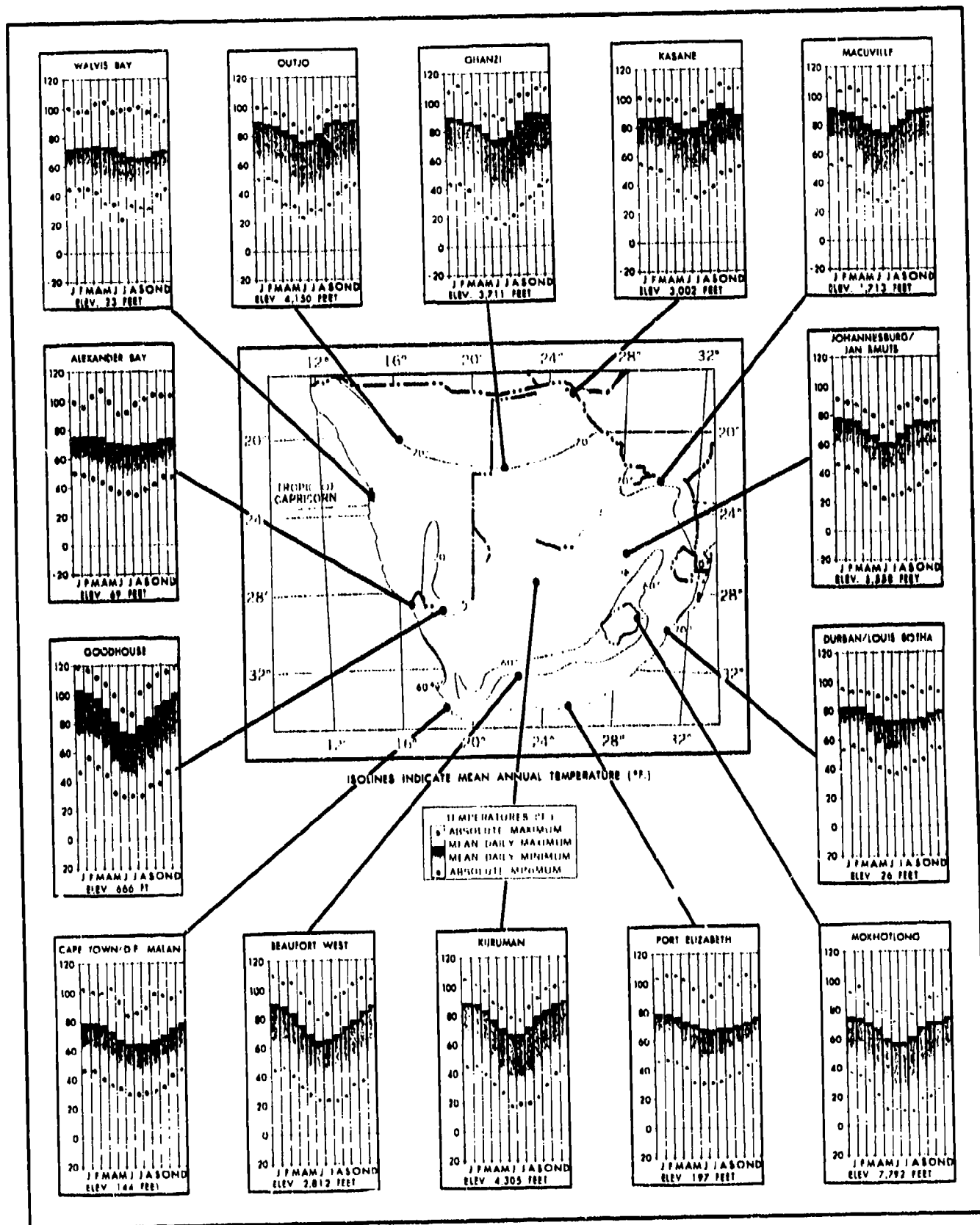


FIGURE 2. Temperatures (°F.). (For tabular data see Figures 25 and 26.)

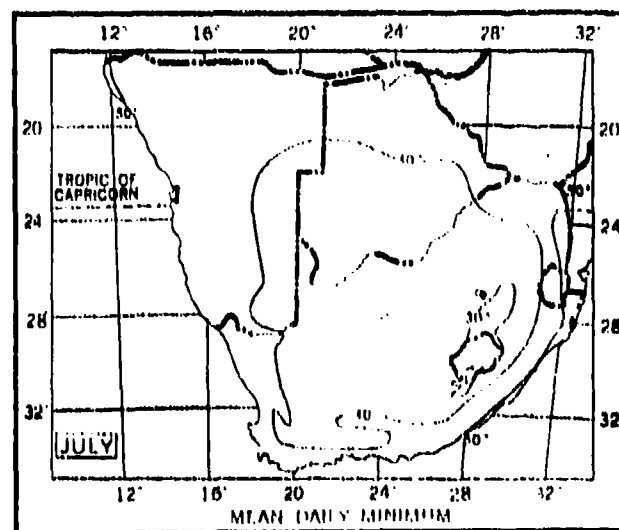
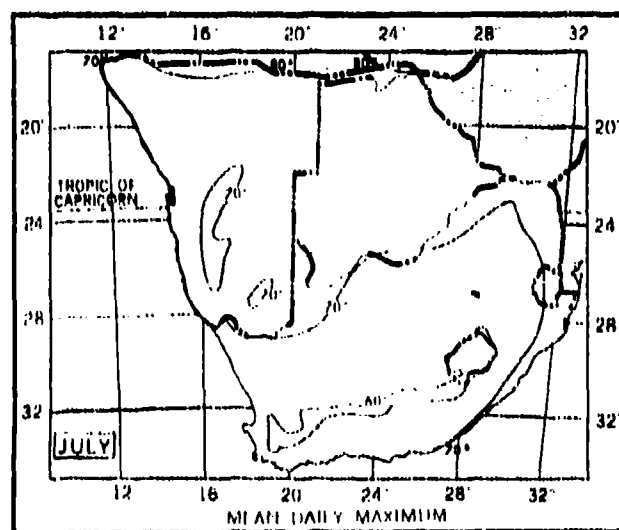
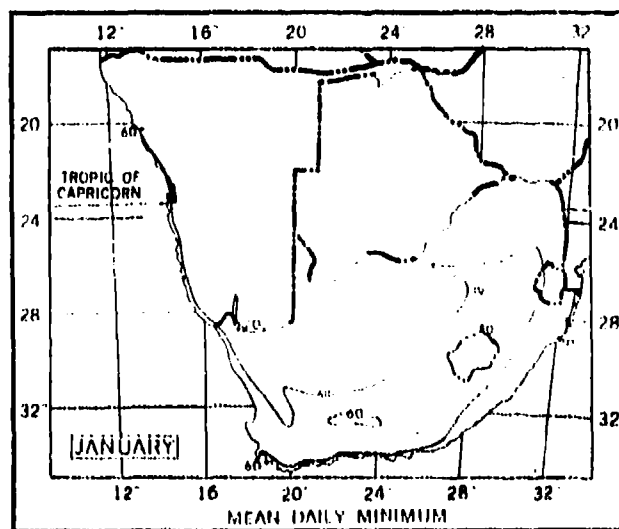
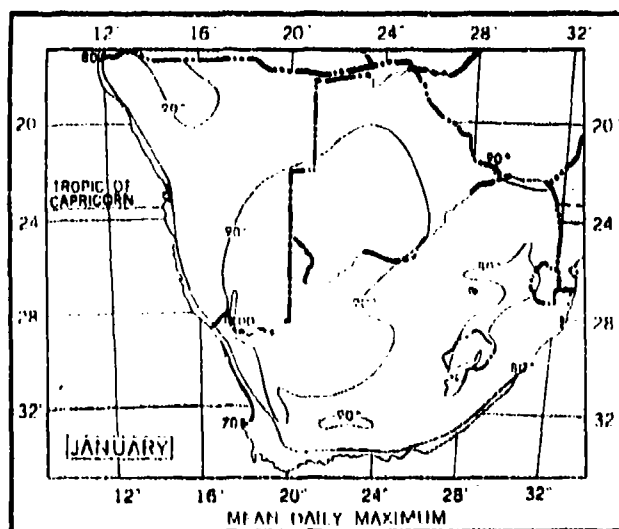


FIGURE 3. Mean daily maximum and minimum temperature ( $^{\circ}\text{F}$ .), January and July

therefore, that frosts may occur at other highland locations of comparable elevation and latitude throughout the year, particularly in the mountain valleys.

Days with a maximum temperature of  $90^{\circ}\text{F}$ . or higher are most frequent on the plateau and in the lowlands bordering Mozambique (Figures 4 and 29). They occur in these areas on 100 to 150 days annually, mostly between midspring and early autumn, and normally on 10 to 30 days per month. Days this hot are less frequent in the remainder of the Area, particularly in the eastern highlands and along the coasts, where occurrences are rare. Days with a minimum temperature of  $32^{\circ}\text{F}$ . or lower are most numerous, more than 50 per year, in the eastern and southern highlands (Figures 5 and 30), where freezing temperatures can generally be expected on 10 to 25 days per month during winter. However, they are infrequent in the coastal lowlands and at northernmost inland locations. In fact, many locations on the immediate coastline and in the lowlands bordering Mozambique have never recorded a freezing temperature.

b. UPPERAIR.—The mean upper-air temperature pattern is fairly uniform over South Africa during summer (Figures 6 and 7). During winter, however, southern portions are frequently subject to polar influences in the westerlies aloft, so that mean upper-air temperatures show a significant latitudinal contrast.

In summer mean upper-air temperatures generally decrease nearly 10 Celsius degrees per 5,000 feet up to the tropical tropopause, which has a mean height of approximately 55,000 feet over all of South Africa. Above this level temperatures increase slowly with altitude. Thus, in summer the lowest mean temperatures aloft, about  $-70^{\circ}\text{C}$ . to  $-75^{\circ}\text{C}$ ., occur at about 55,000 feet over all sections of South Africa. In fact, at this level it is colder in summer than in winter. The winter situation is very similar to that of summer over the tropical latitudes. Southward, however, winter temperatures become increasingly colder than summer temperatures at levels below approximately 40,000 feet. Over the south the mean temperature lapse rate decreases sufficiently near 40,000 feet to define the polar tropopause near this level. Above the polar tropopause in the south, winter

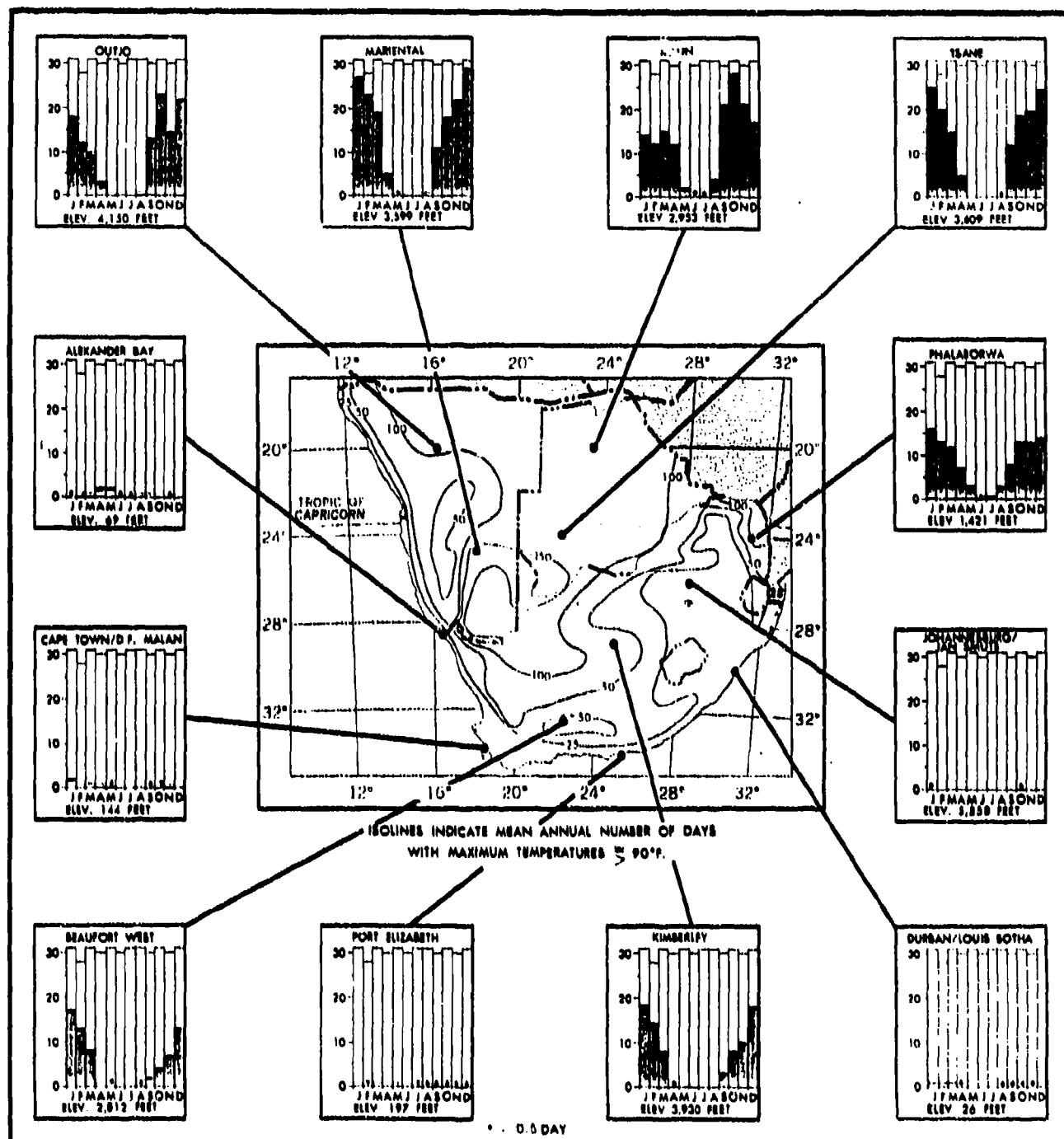


FIGURE 4. Mean number of days with maximum temperature  $\geq 90^{\circ}\text{F}$ . (For tabular data see Figure 29.)

temperatures are nearly isothermal, and the tropical tropopause is absent.

Along the west coast upper-air temperatures are greatly influenced at the lowest levels by the cool coastal waters and at higher levels by warming due to subsidence. As a result, temperatures near the surface are typically lower than at levels immediately above, and these inversions are frequently strong. To a lesser extent and mostly during winter inversions also occur over the plateau, where intense terrestrial radiation at night reduces temperatures at the surface more rapidly than at higher

levels. Subsidence over the plateau in winter also contributes to the formation of temperature inversions, which trap suspended dust and pollutants.

In summer the mean height of the freezing level is about 16,000 feet except in the extreme south, where it is 1,000 to 2,000 feet lower. In winter it ranges from about 15,000 feet in the north to 10,000 feet in the south.

## 2. Humidity

Relative humidity is consistently high along the coasts, exceeding 50% at all times of the day in all seasons

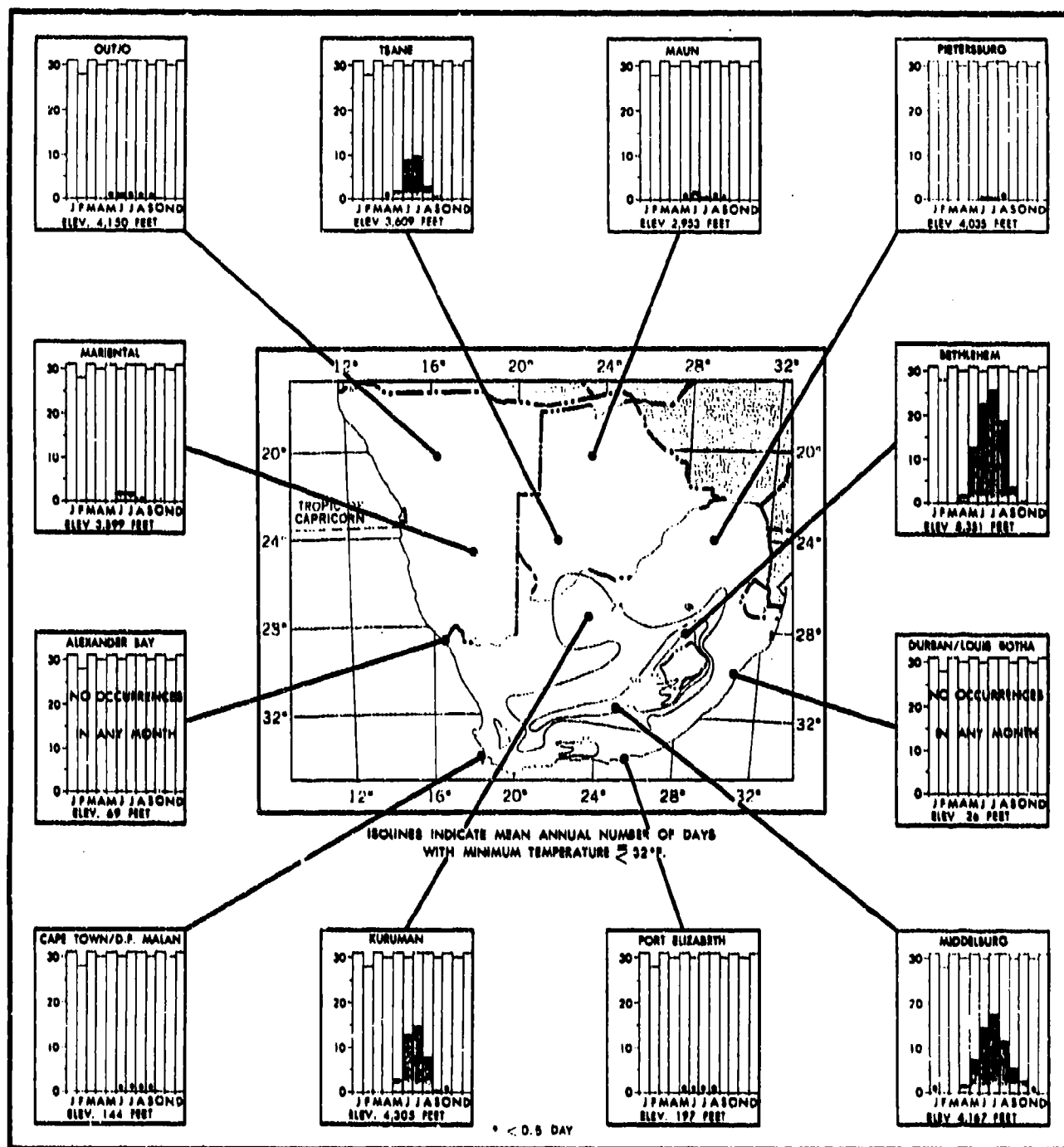


FIGURE 5. Mean number of days with minimum temperature  $\geq 32^{\circ}\text{F}$ . (For tabular data see Figure 30.)

(Figures 8 and 31). It decreases inland and reaches a minimum in the western interior, where the influx of moisture is meager throughout the year. There, several places experience relative humidity less than 30% all year in the afternoon.

Relative humidity varies directly with the moisture content of the air but inversely with temperature. Diurnal and annual variations of relative humidity are generally small along the coasts, where temperature and moisture are most conservative. Inland, the diurnal and annual ranges are greater because of more pronounced variations

of both temperature and moisture. The diurnal cycle of relative humidity is similar everywhere in South Africa, with the highest values occurring near dawn, the coolest time of day, and the lowest in midafternoon, the warmest time of day. Temperature plays a less important part in determining the annual march of relative humidity because seasonal changes of moisture are generally larger than those of temperature. In almost all of South Africa except the extreme southwestern and southern portions, the influences of annual moisture and temperature patterns on relative humidity are opposing. Conse-

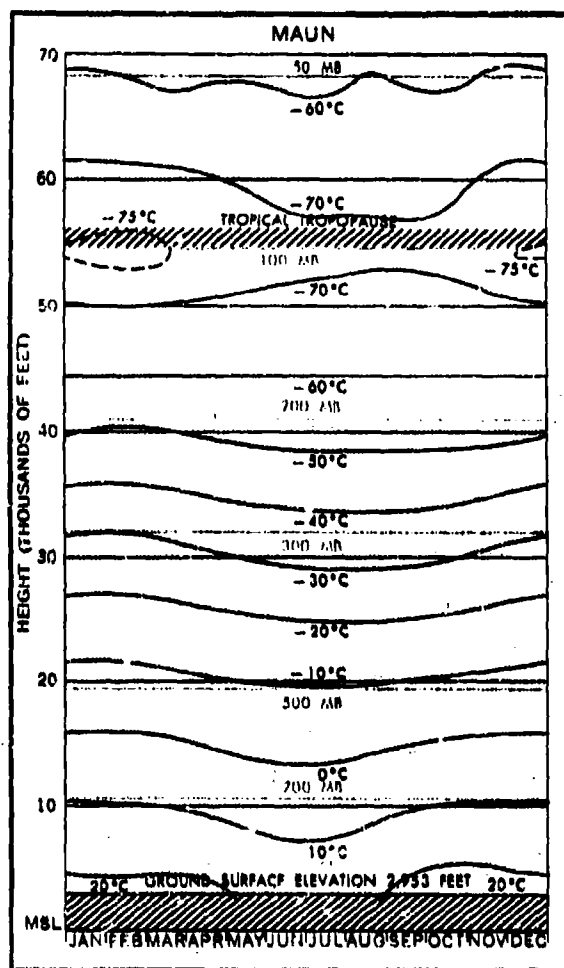


FIGURE 6. Mean monthly upper-air temperature and pressure at Maun, Botswana

quently, relative humidity reaches a maximum during the summer-autumn period and a minimum during the winter-spring period. In the extreme southwest and south the effects of seasonal regimes of moisture and temperature are additive, resulting in maximum relative humidity during the autumn-winter period and a minimum during the spring-summer period.

High relative humidity in summer contributes to the discomfort experienced during hot afternoons in many areas. Conditions are particularly oppressive near the swampy sections of the northern plateau and in the hot, humid lowlands bordering Mozambique. Although summer daytime temperatures are highest in western portions of the plateau, low humidity mitigates the discomforting effects of the heat.

### 3. Precipitation

Precipitation in South Africa occurs mostly as rain. Its distribution is characterized by a fairly regular decrease from east to west and by the marked effect of orographic features (Figures 9 and 32). Over the greater part of South Africa precipitation is concentrated in the summer months, with meager amounts in winter. However, southwestern sections and much of the south coast experience a winter maximum and a summer minimum.

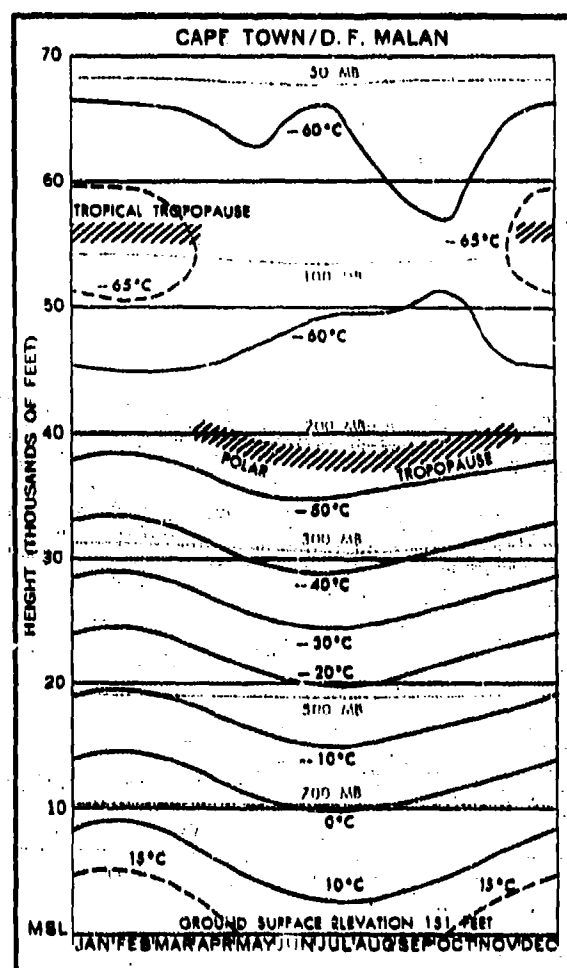


FIGURE 7. Mean monthly upper-air temperature and pressure at Cape Town/D. F. Malan, Republic of South Africa

The orographic influence on precipitation is most pronounced in the extreme southwest because of the juxtaposition of mountains, valleys, basins, and coastal lowlands. Mean annual precipitation at places on the coastal plain and in the sheltered valleys is near 10 inches but increases to well over 100 inches on some of the nearby mountain ridges that are exposed to the moist winds. Along the Drakensberg range the increase of precipitation with elevation is not quite as pronounced, but substantial amounts are much more widespread than in the extreme southwest. Most of the eastern highlands and all of the east coastal areas receive an average of about 30 inches or more of precipitation per year, but it varies greatly according to exposure. The greatest amounts fall along the upper slopes of the Drakensberg, with over 70 inches per year at some isolated locations. Mean annual precipitation decreases westward across the plateau to less than 1 inch along the desert coast of South-West Africa.

The summer maximum and winter minimum precipitation regime that characterizes most of South Africa is most accentuated in northern sections of the plateau. There, more than 60% of the annual total is

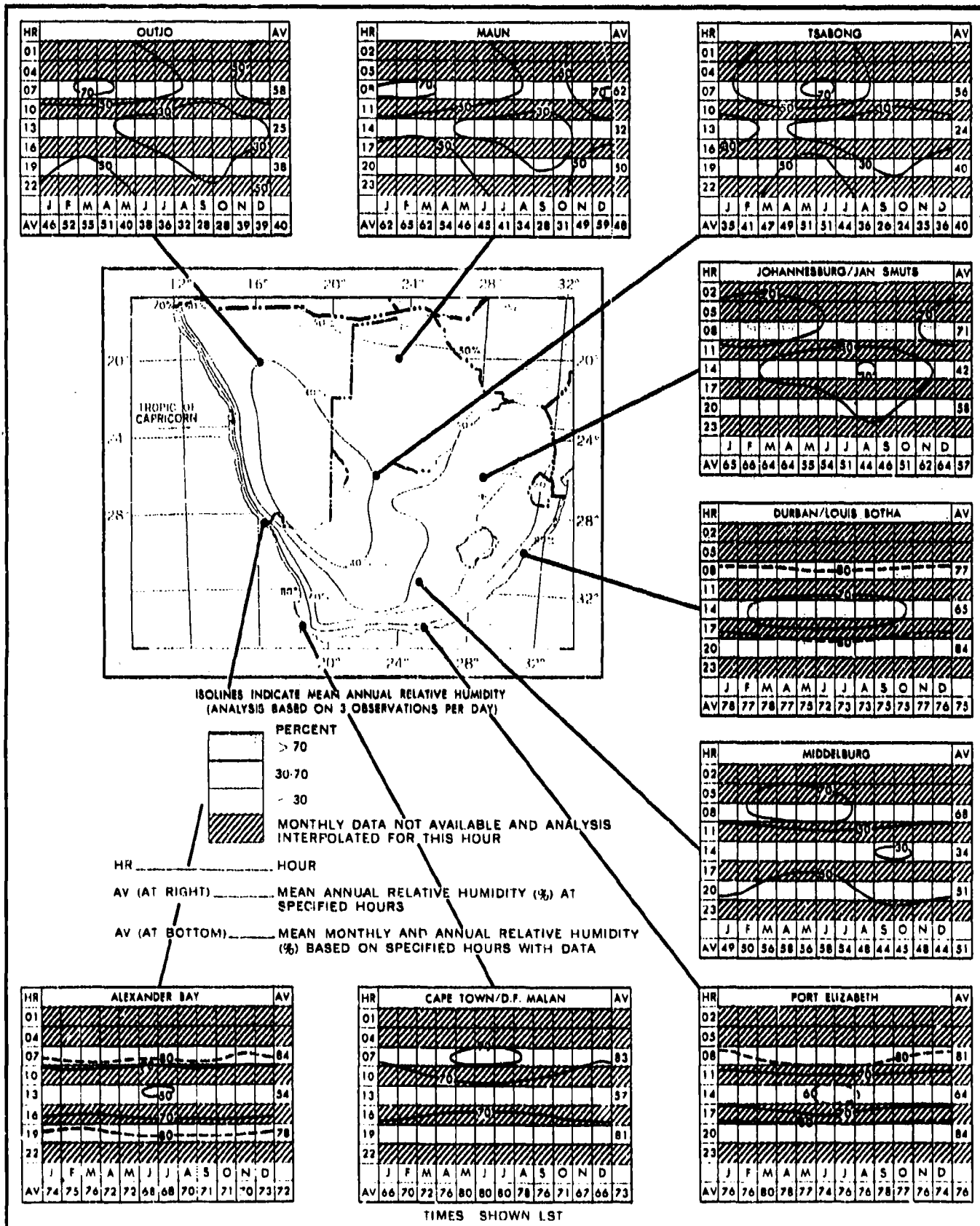


FIGURE B. Mean relative humidity (%). (For tabular data see Figure 31.)



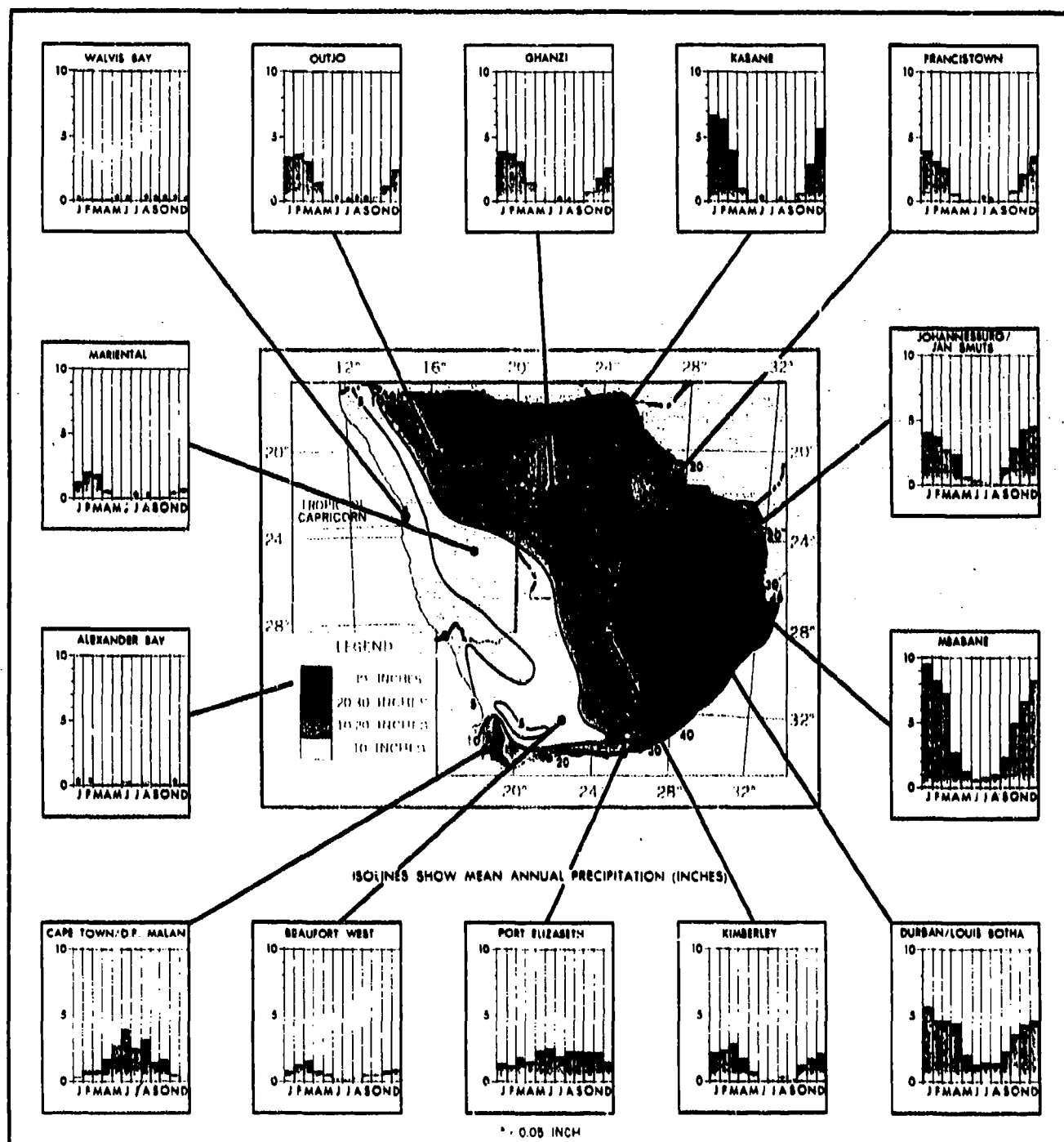


FIGURE 9. Mean precipitation (Inches). (For tabular data see Figure 32.)

received during the summer months, and almost no rain falls during winter. Summer rainfall amounts are greatest in the extreme north and in the east (Figure 10). Total summer precipitation in each of these sections averages more than 15 inches, with mean monthly amounts reaching a maximum of 5 to 10 inches. Summer rainfall decreases westward to insignificant amounts along the arid Atlantic coast. The proportion of annual precipitation that falls during summer gradually decreases toward the southwest. In the extreme southwest, less than 10% of the mean annual total falls

during summer, whereas more than 40% is received during winter. Winter precipitation is greatest in the coastal mountains of this region. For example, at Jonkershoek total winter precipitation averages 63.5 inches, with mean monthly precipitation for June, July, and August about 20 inches for each month. Much lesser amounts are received along the south and east coasts and at sheltered locations and lower elevations in the extreme southwest.

In general, the frequency of days with measurable precipitation ( $\geq 0.004$  inch) closely conforms to the

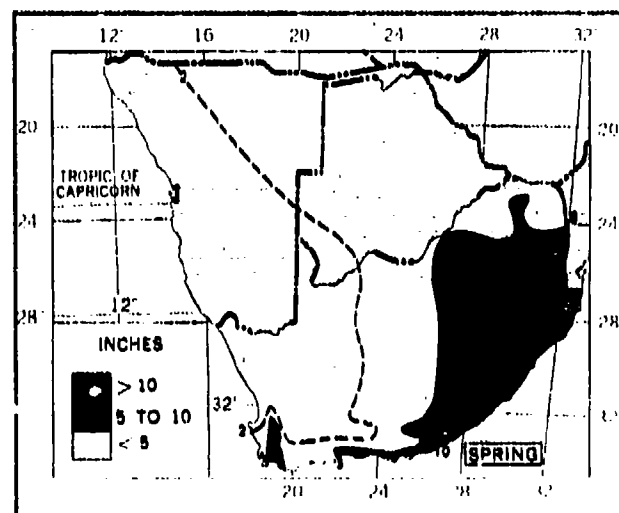
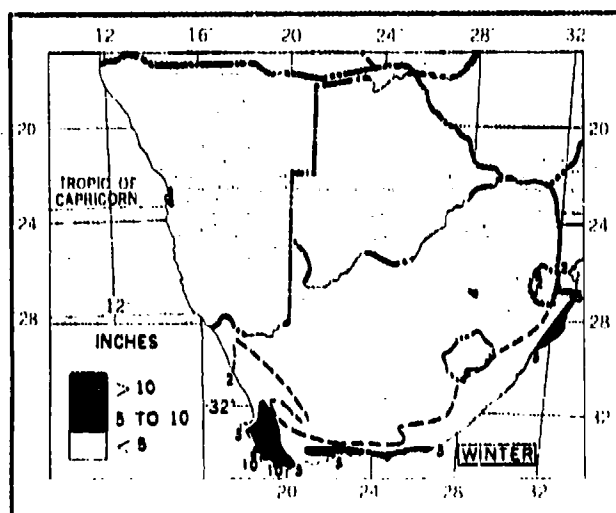
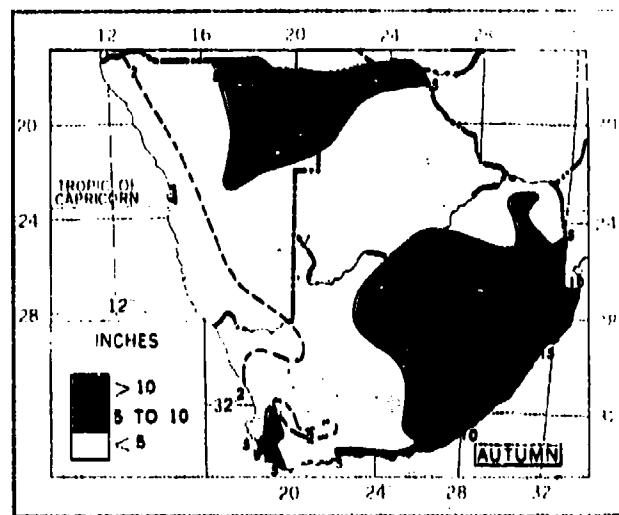
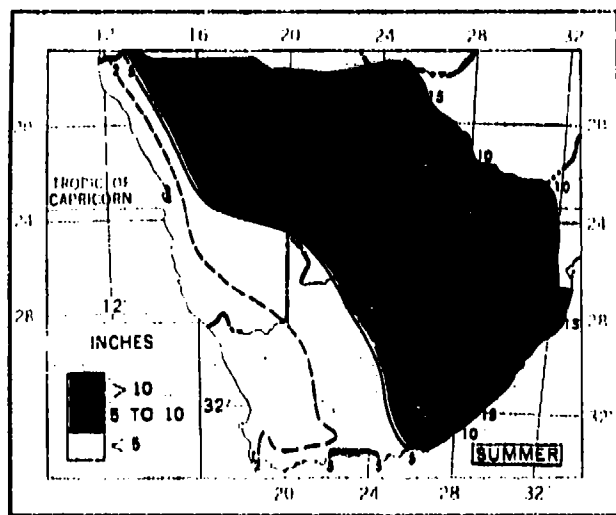


FIGURE 10. Mean seasonal precipitation (inches)

distribution of mean precipitation. On the average, precipitation occurs on more than 100 days per year along much of the south coast and in the east, but the frequency drops to only a few days per year on the west coast (Figures 11 and 33). Along the south and east coasts precipitation falls on an average of about 5 to 15 days per month in all seasons. Along the Drakensberg range, most places average 10 to 20 rainy days per month during summer but in winter precipitation generally falls on 5 days or less per month. In northern sections of the plateau the frequency of summer rains is comparable to that in the east, but winter days with precipitation are rare. Precipitation is probably quite frequent in some of the coastal mountains of the southwest, particularly in the colder months.

The bulk of the summer rainfall in most of the Area comes from brief showers that may be rather heavy at times. In the drier portions of South Africa, abnormally heavy rain may accumulate rather large 24-hour amounts as compared to mean monthly totals (Figures 32 and 34). In the extreme southwest and in the south coastal

sections, precipitation is usually of lesser intensity but more prolonged because of its cyclonic origin. Against the seaward-facing slopes of the Drakensberg range, light orographic precipitation in the form of drizzle is quite frequent when there is an onshore flow from the Indian Ocean. This phenomenon also occurs on the higher ridges of the southwest and south coastal ranges when there is a strong onshore circulation.

In general, the Drakensberg and the east and south coastal sections have experienced the greatest ranges of precipitation amounts (Figure 35). Everywhere, however, any month can be quite dry. From time to time South Africa is susceptible to severe drought conditions, aside from the part of the year that is normally dry. Rainless periods are much more prolonged in the interior and toward the Atlantic coast than along the south and east coasts and in the Drakensberg. Intense evaporation, which is common to most of South Africa, makes any deficiency of rainfall desiccating, even during droughts of short duration. Flash flooding is a possibility during the warmer months in most of South Africa because of

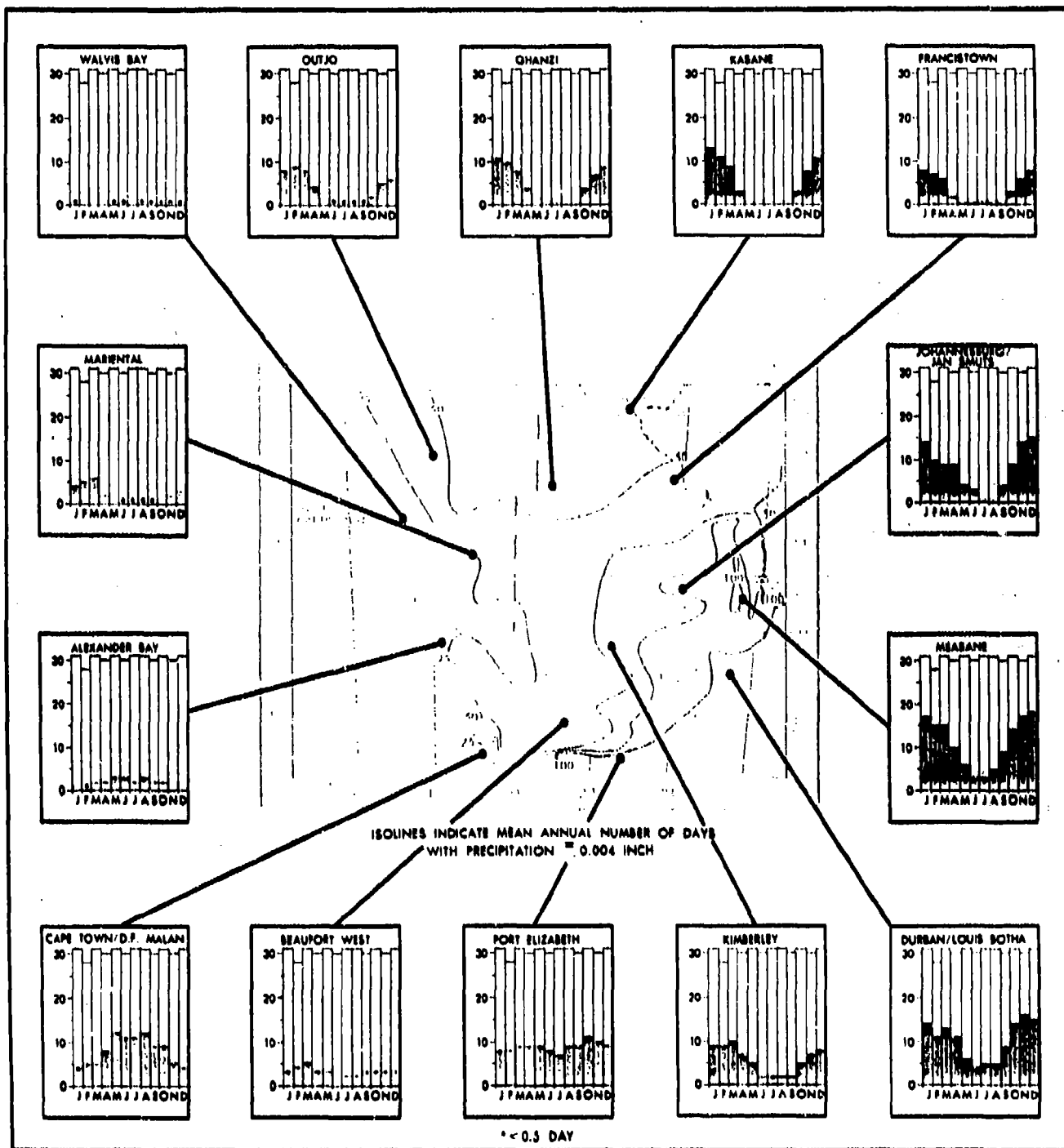


FIGURE 11. Mean number of days with precipitation  $\geq 0.004$  inch. (For tabular data see Figure 33.)

intense, short-period convective showers. More extensive flooding may occur in the flat, low-lying portions of the wettest sections when long periods of heavy precipitation occur. Marsh and swamp areas along the northeast coast normally experience relatively extensive flooding during the wet summers. Moderate summer rainfall and interior drainage cause parts of the northern plateau to be periodically inundated by shallow sheets of water. Snow occurs occasionally, mainly on the higher mountain ranges in the south and southeast; usually, it falls on

fewer than 10 days per year and mostly during winter. Snow may fall infrequently in other sections, but it melts rather quickly.

#### 4. Cloudiness

Summer is distinctly the season of maximum cloudiness and winter the season of minimum cloudiness except in the southwest, where seasonal contrasts are small (Figures 12 and 36). Sunshine is abundant in most sections, even in the cloudiest months.

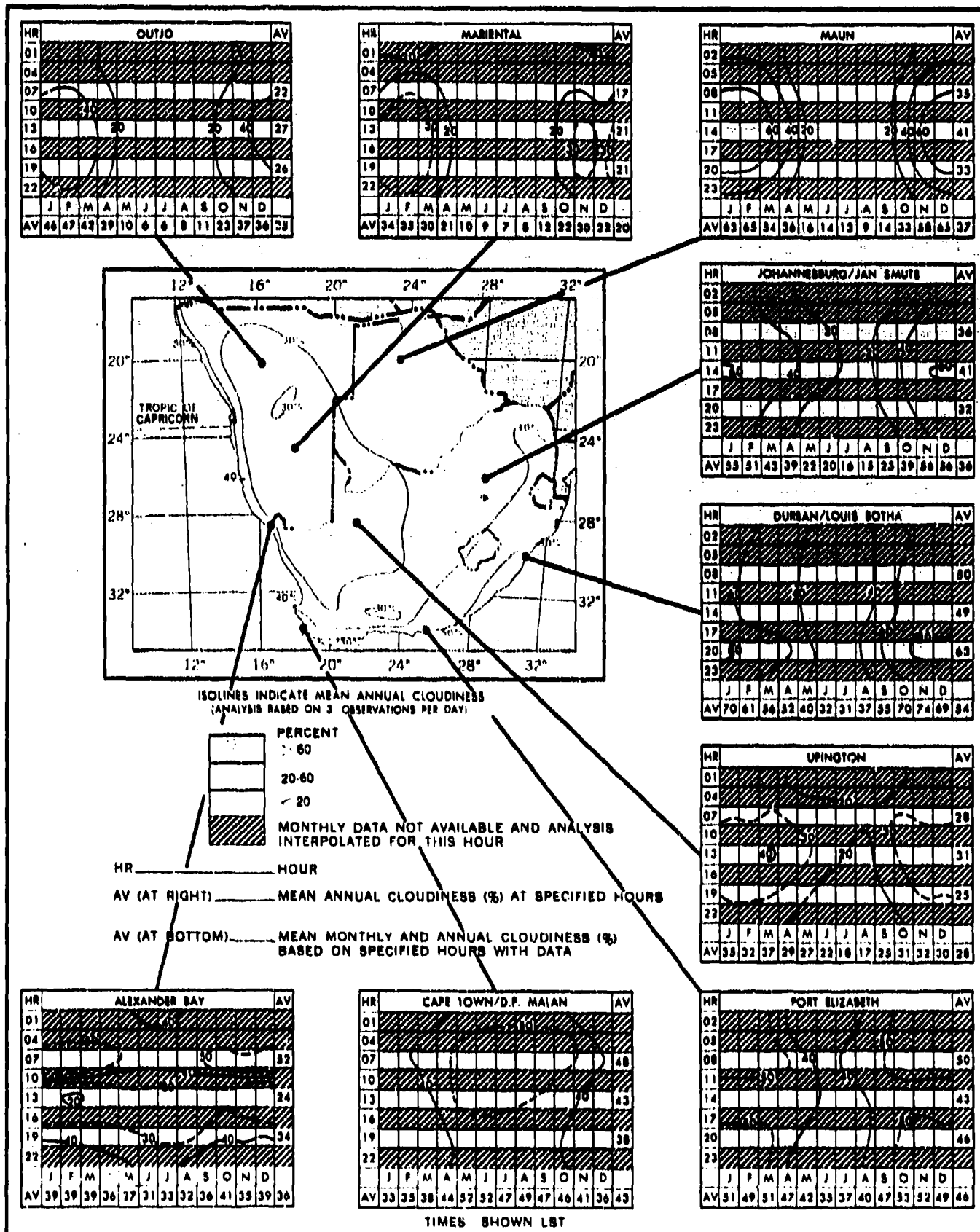


FIGURE 12. Mean cloudiness (%). (For tabular data see Figures 36 and 37.)

The differences of cloudiness between seasons is most pronounced in northern parts of the plateau, where mean monthly cloudiness in summer is about 50 to 60 percent greater than in winter. The annual range of cloudiness decreases most toward the west and south, reaching a minimum of less than 10 percent in the extreme southwest. The greatest summer cloudiness is experienced in parts of the east and the north, where mean monthly cloudiness is about 60% to 70% throughout summer. Minimum summer cloudiness occurs in the southwestern interior, where mean monthly cloud amounts range from 15% to 25%. In winter cloud amounts are small in most of South Africa, especially on the plateau, where mean monthly cloudiness is mostly less than 30%; in interior portions of South-West Africa it drops to less than 10%. The greatest winter cloudiness occurs in the southwest, where mean monthly cloud cover ranges mostly from 40% to 55% along and near the coast. Although cloud data are lacking for the coastal mountains of this region, the precipitation data indicate that winter cloud amounts probably exceed those near the coast.

The diurnal variation of cloudiness is largest along some portions of the west coast, and it significantly exceeds the annual variation of mean monthly cloud cover (Figures 12 and 37). The cool coastal waters cause extensive low stratus and fog, which frequently drift inland during the night. The fog and stratus generally dissipate during the day. For example, at Alexander Bay cloud cover throughout the year averages about 40% to 60% at 0700 LST as compared to only about 20% to 30% at 1800 LST. This diurnal range reaches a maximum in late spring through early autumn of 30 to 40 percent as compared to an 8 percent annual range of mean monthly cloud cover. Along parts of the immediate coast, however, the fog and stratus may persist throughout the day. In other coastal areas the diurnal variation generally is not as pronounced, but there also is a tendency for maximum cloud cover to occur near sunrise. Inland the diurnal range of mean cloudiness is small except in summer, when moist air masses are relatively frequent and daytime cumulus and cumulonimbus development characteristically culminates in maximum cloud cover during afternoon and early evening.

Sunny days and clear nights (cloud cover  $2/8$  or less) are typical of winter almost everywhere except in southwest coastal sections, where cloudy days and nights (cloud cover  $6/8$  or more) are common (Figures 38 and 39). Practically the entire plateau experiences 20 or more days with clear skies at all observation hours throughout winter. At many places these conditions extend into spring and autumn. Although clear skies are least frequent during summer in most of South Africa, they are still common except in northern and eastern sections. However, even in these sections skies are frequently only partly cloudy (cloud cover  $3/8$  to  $5/8$ ), and the sun usually appears before and after relatively brief afternoon showers.

Low ceilings are most frequent in coastal sections and inland in the east to the top of the Drakensberg range.

Ceilings below 3,300 feet have been observed as much as 30% to 55% of the time in these sections, but probably occur even more often on slopes that are well exposed to the moist flow in the coastal mountains of the southwest and south and along the Drakensberg range (Figures 13 and 40). The frequency of low ceilings decreases to a minimum in western and southern portions of the plateau, where ceilings of any height are unusual because of meager cloud amounts throughout the year. In general, low ceilings occur most often in late spring through early autumn except in southwest portions, where they can occur equally or more often in winter. Ceilings less than 1,000 feet are mainly a morning phenomenon associated with stratiform clouds and fog (Figures 14 and 41). Frequent stratus and fog along the west coast result in the greatest incidence of ceilings below 1,000 feet found anywhere in South Africa. For example, at 0700 LST Alexander Bay has ceilings below 1,000 feet on as much as 36% of the observations and below 650 feet as often as 30% of the observations (Figure 42). Because the stratus and fog usually dissipate during the day, very low ceilings at Alexander Bay rarely persist until the afternoon, but at Walvis Bay and some other locations on the west coast it appears that the stratiform cloud cover and fog more often persist through the afternoon. Along the other coasts and in the eastern highlands ceilings less than 1,000 feet occur occasionally but are, in general, less frequent than along the west coast. However, some locations in the coastal mountains of the southwest and south and in the Drakensberg that are well exposed to the moist flow probably often experience clouds that shroud the slopes.

### 5. Aircraft Icing

In general, the conditions favorable for icing are supercooled clouds or liquid precipitation present above the freezing level. In summer these conditions occur in towering cumulus and cumulonimbus clouds, which are most frequent in northern and eastern parts of South Africa. In the extreme west and southwest clouds rarely build to above the freezing level in summer. In winter, cloud conditions are generally not favorable for icing in most of South Africa except on occasions when frontal-cloud buildups associated with the leading edge of cold, moist air masses sweep into the interior from southern ocean areas. The greatest icing hazard in winter occurs over the extreme southwest and south, where the deep cloud systems of migratory lows and fronts usually occur simultaneously with low freezing levels.

### 6. Visibility

Visibility is most frequently restricted in coastal areas and in the eastern highlands. Lowest visibilities are mostly confined to the morning hours. At some places along the coasts and in the eastern highlands visibility is less than 6 miles as much as 40% to 60% of the time in the early mornings (Figures 15 and 43). Visibility is usually good to excellent on the remainder of the plateau, where it is 6 miles or more at least 90% of the time at all

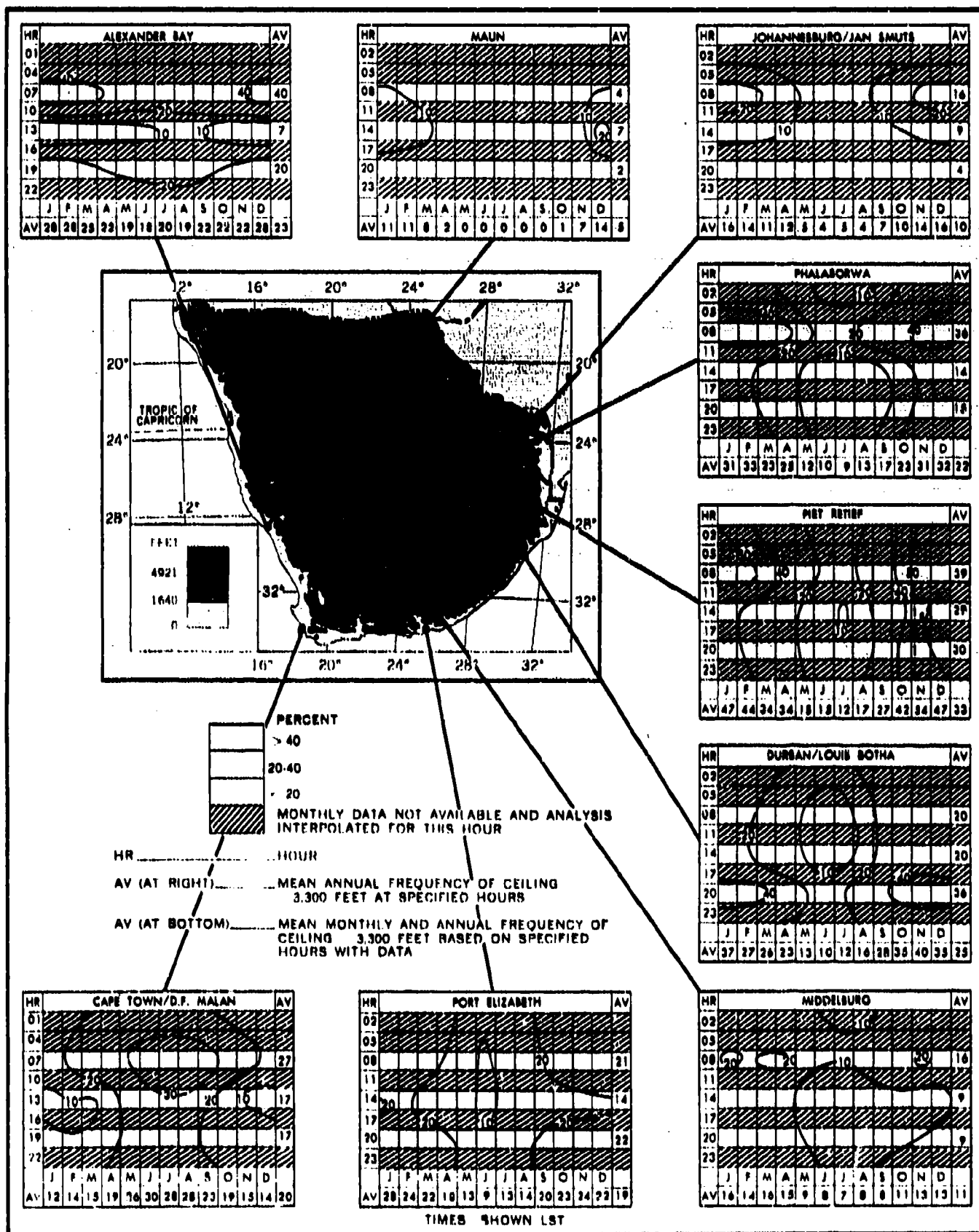


FIGURE 13. Percentage frequency of calling <3,300 feet. (For tabular data see Figure 40.)

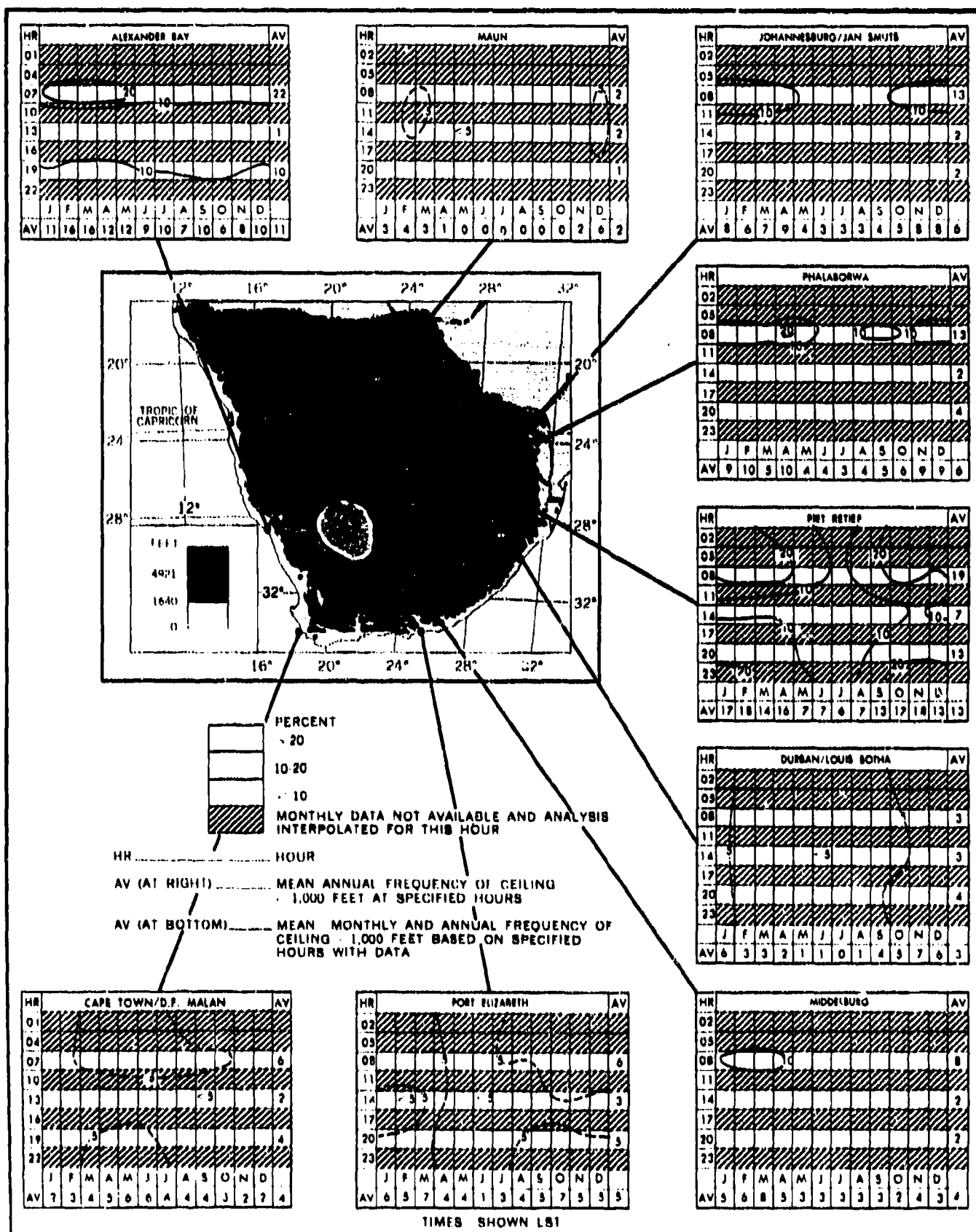


FIGURE 14. Percentage frequency of ceiling <1,000 feet. (For tabular data see Figure 41.)

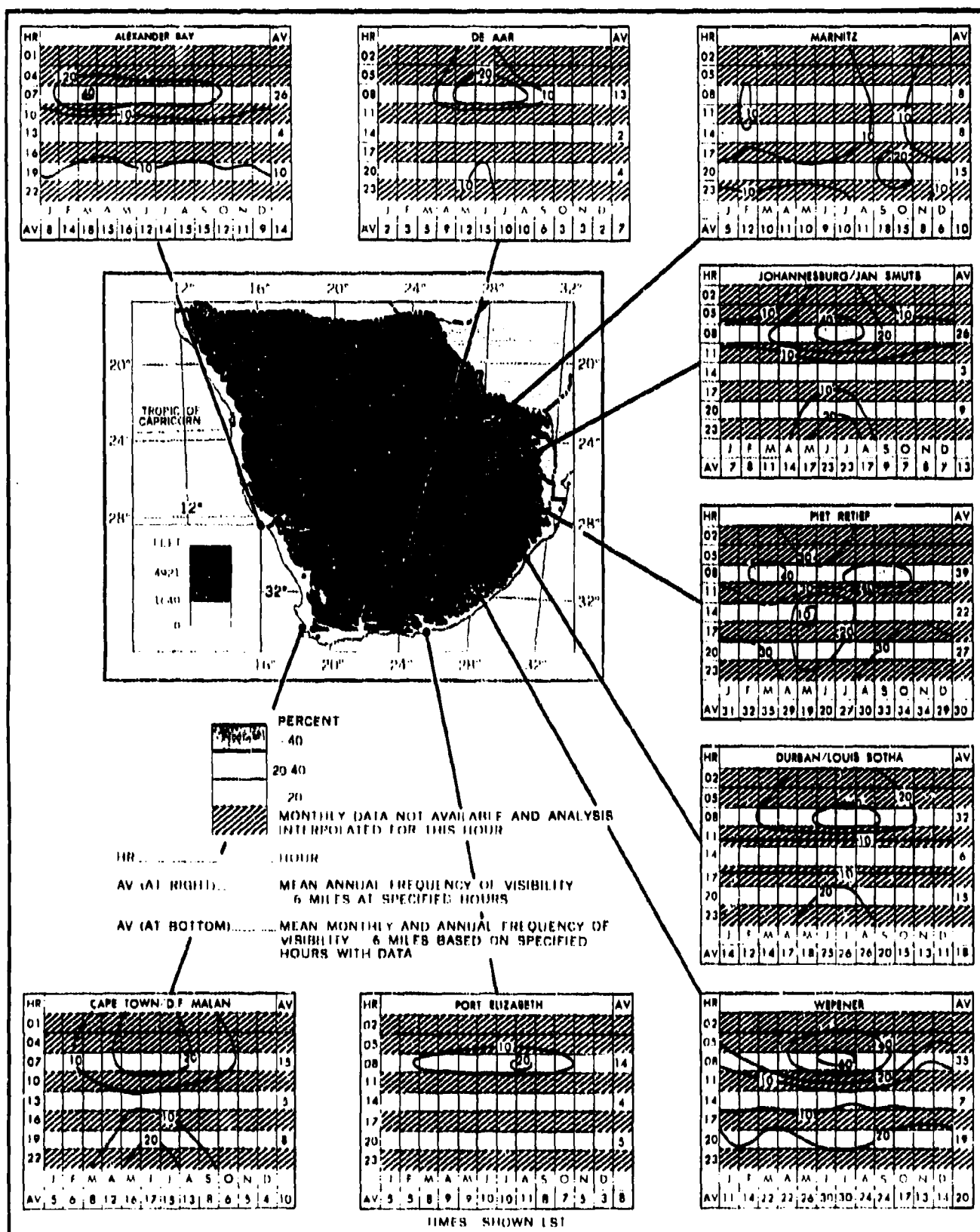


FIGURE 15. Percentage frequency of visibility < 6 miles. (For tabular data see Figure 43.)



observation hours throughout the year. Visibility is less than  $2\frac{1}{2}$  miles on as much as 10% to 30% of the observations near sunrise along the west and southwest coasts and in the eastern highlands (Figures 16 and 44).

The most effective restrictions to visibility are usually radiation fog in the valleys of the eastern highlands and sea fog along most of the west and southwest coasts (Figure 45). Radiation fog reaches its greatest density during the morning but usually dissipates by noon from the warmth of the sun. It is somewhat more likely to occur in autumn and winter, but it can occur in all seasons at some places. Sea fog, which frequently drifts inland along the west coast and to a lesser degree along the southwest coast during the night, normally dissipates over the land during the day but along parts of the immediate coast may persist throughout the day. It is not unusual for this fog to lower visibility to less than  $5/8$  mile along the coast. Fog is most frequent during autumn and winter in most of the west and southwest coastal areas. Low clouds sometimes obstruct visibility on mountain slopes in the extreme southwest and south and in the east, particularly along the Drakensberg range. In summer, visibility can be greatly reduced for short periods by brief but intense showers, particularly in the wettest sections. A hazy and smoky atmosphere caused by suspended dust, industrial pollutants, and smoke from brush fires is common in winter and early spring (Figure 46). During this time dry, stagnant continental air predominates in most of South Africa, particularly on the plateau. Along the coasts, salt haze from the oceans sometimes occurs. Haze and/or smoke normally do not severely reduce visibility. In urban and industrial centers and in areas that are dry throughout the year, haze and/or smoke may be frequent in all seasons. Blowing sand and dust is fairly common along the southern part of the west coast, and occasionally visibility is severely restricted. Blowing sand and dust is less frequent elsewhere but does occur over dry, barren ground when surface winds are sufficiently strong.

## 7. Winds

**a. SURFACE.**—Most of South Africa is influenced by day-to-day changes in the distribution of surface pressure, so that surface winds from all directions are common. There are, however, favored directions that are generally common to certain regions.

Between surface winds on the plateau and those along the coasts there is a general discontinuity, particularly in the southern half of South Africa. Surface winds along the coasts show a tendency to parallel the coastline (Figures 17 through 20 and 47). Along the east coast they frequently blow from the southwest and northeast quadrants throughout the year. Along the south coast winds are predominantly from the east and west quadrants during summer, but by winter the easterlies give way to more frequent westerlies. Along the west coast the summer pressure gradients are almost always conducive to southerly winds in the south and to southwesterlies in the north. Along southern portions of

the west coast southerly winds are much less frequent during winter, and westerlies and offshore winds are fairly common; southwesterlies continue during winter in the north. In all coastal sections throughout the year there is a greater frequency of winds with an onshore component during the afternoon, when sea breezes occur. Along the southwest and west coasts the afternoon temperature difference between the cool coastal waters and the nearby land areas is very large during the warmer months. This results in strong sea breezes which quite markedly reinforce the prevailing southerly flow. Light offshore winds, or land breezes, and calms occur in most coastal areas during the night and early morning hours; land breezes are much more frequent in winter than in summer.

Across northern portions of the plateau surface winds in summer are mostly from the east and northeast quadrants, and in the southern portions they are mostly from the north and northwest sectors. In winter prevailing surface winds on most of the plateau are more pronounced than in summer, but the directions remain essentially unchanged. In many central and southern portions of the plateau the west component of the surface wind is prominent during the afternoon because the plateau surface lies near the boundary of westerlies aloft, and afternoon convection transfers momentum from these westerlies downward to the surface. In the north, easterly winds tend to prevail at all times of the day because of the greater depth of the easterlies. Throughout the plateau winds are generally lightest and calms are frequent during the night and early morning, particularly in winter.

In general, surface wind speeds increase southward. In the northern half of South Africa mean speeds are around 10 knots or less throughout the year, and actual speeds exceeding 16 knots are infrequent. In the southern half mean speeds are mostly 10 to 15 knots in the interior and 10 to 20 knots along the coasts. Gale-force winds ( $> 27$  knots) are confined almost exclusively to the coasts and to inland sections of the extreme south (Figure 48). Along the east, south, and extreme southwest coasts gales are normally associated with the occasional strong pressure gradients which often accompany migratory low-pressure systems and fronts. Along much of the southern half of the west coast gale-force winds occur mostly during the warmer months and are attributed mainly to the reinforcement of the persistent southerly flow by intense afternoon sea breezes. At Alexander Bay, for example, southerlies reach gale force on more than 10% of the observations at 1300 LST in November and December. The afternoon winds over the desert areas along the southern half of the west coast are at times strong enough to cause blowing sand and dust. An afternoon increase of wind speeds also occurs along the other coasts, but it is not as pronounced as along the southern half of the west coast. The strongest winds experienced at most interior locations normally occur in conjunction with thunderstorms and frontal passages and may stir up sand and dust in the dry, barren regions. Violent winds are normally associated with rare occurrences of tornadoes.

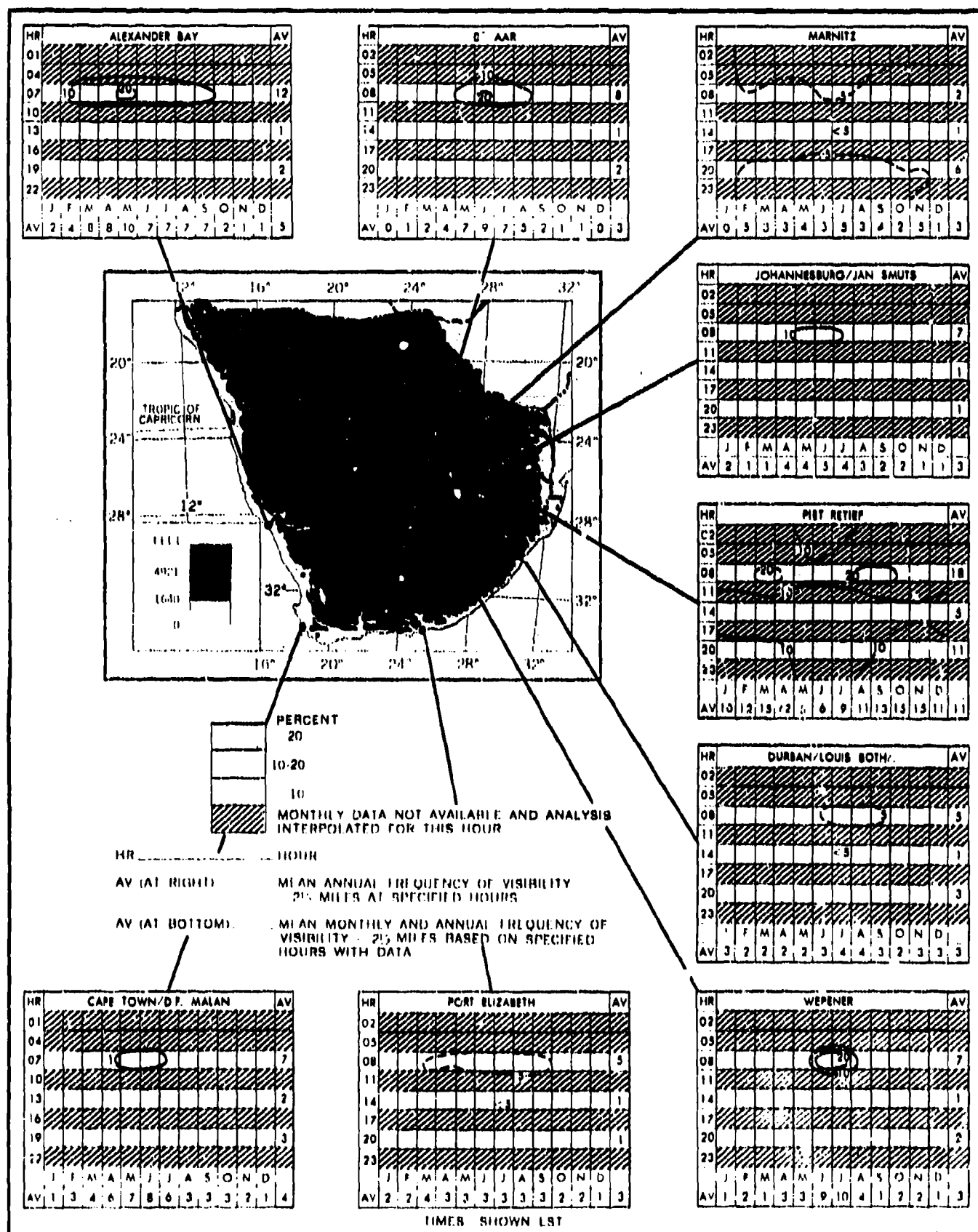


FIGURE 16. Percentage frequency of visibility < 2 1/2 miles. (For tabular data see Figure 44.)

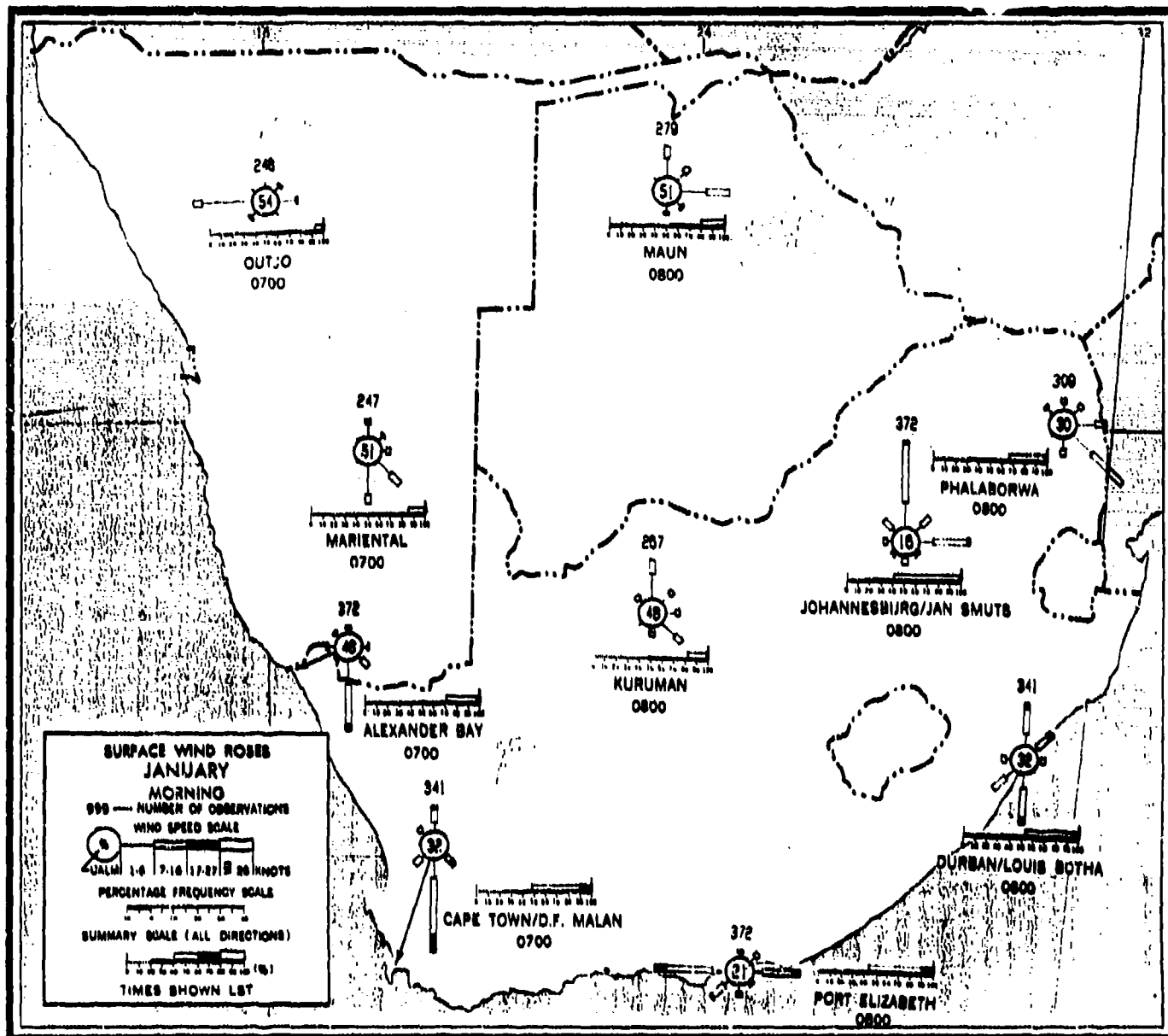


FIGURE 17. Surface wind roses in morning, January

Hot, dry, and unpleasant berg winds occasionally blow across the coastal lowlands from the plateau. These surface winds develop when low pressure lies off the coast and high pressure is over the plateau, a pressure distribution that is most frequent in winter. Berg winds occur about 50 times a year on the west coast and decrease in frequency toward the east coast, where they are uncommon. They may blow for only a few hours or continue for 2 or 3 days in succession. Sometimes, cool sea breezes interrupt the berg winds during the afternoon, so that the highest temperature is often recorded before noon. Whirlwinds or dust devils are common phenomenon over sandy or dusty ground during hot summer days and are caused by strong convection.

In the mountainous areas along the perimeter of the plateau, wind directions are influenced by the configuration of the topography. In many mountain

valleys, local mountain and valley breezes are experienced. The mountain breeze descends the slopes at night and blows down valley, and the valley breeze blows up valley during the day and ascends the valley walls.

b. **UPPER AIR**—Westerly winds prevail aloft over southern sections of South Africa throughout the year (Figures 21 through 23). Over northern sections easterly winds dominate the lower levels, particularly in summer, but westerlies prevail at the higher levels, particularly in winter. The strongest speeds occur in the westerlies over the south during winter.

In summer the westerlies over extreme northern portions of South Africa are weak and are confined mostly to levels between 30,000 and 50,000 feet. Light easterlies prevail above and below these westerlies. Southward, westerly winds become increasingly stronger and progressively dominate more levels. Over most of the

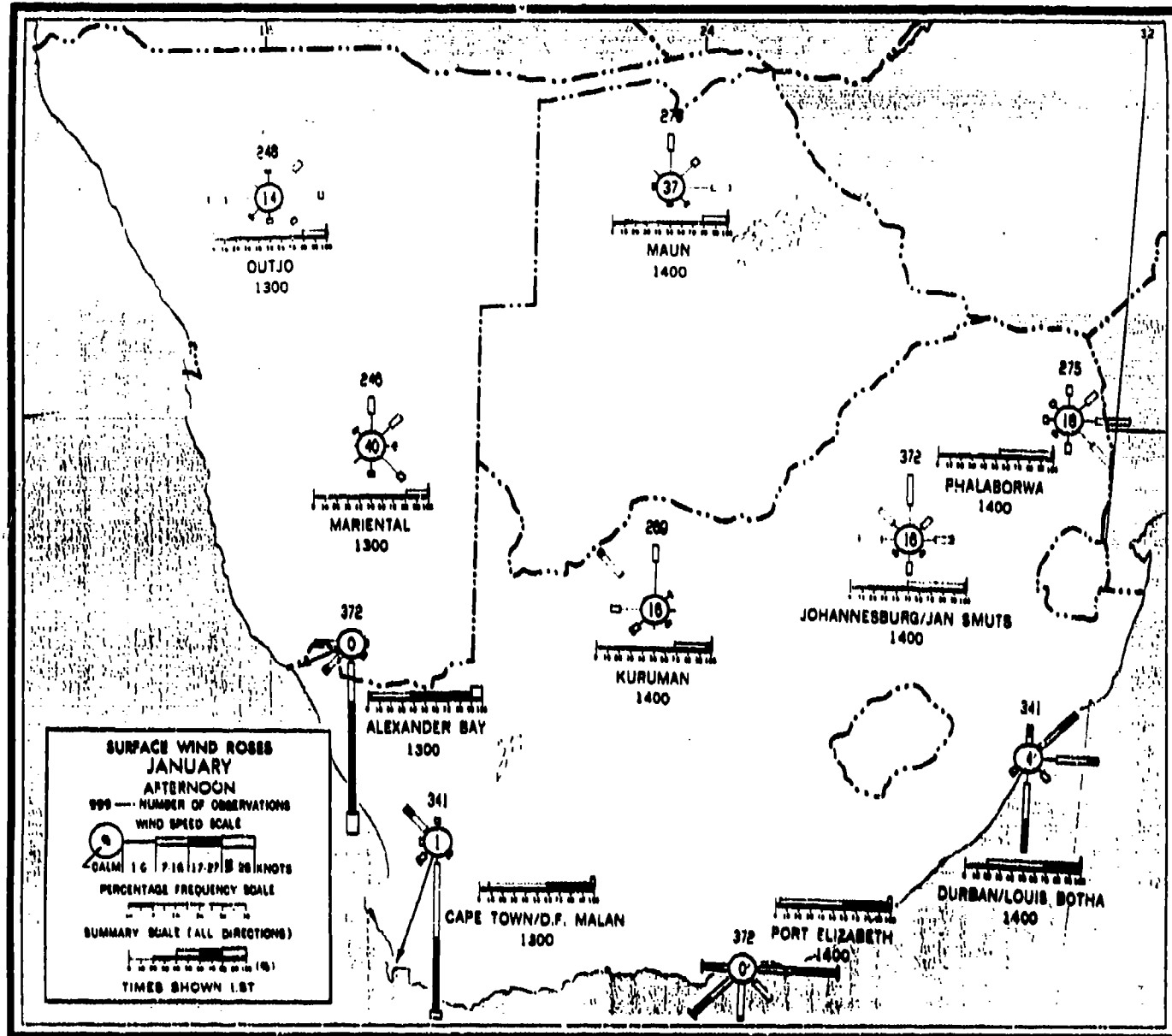


FIGURE 18. Surface wind roses in afternoon, January

southern half of South Africa westerlies prevail during summer at all levels to over 60,000 feet and are strongest in the extreme south. As winter approaches, the low-level easterlies recede northward and become quite shallow. During winter they predominate only over the extreme north up to about 15,000 feet. The high-level easterlies are absent over the north in winter, and westerlies prevail up to at least 55,000 feet. Over the remainder of South Africa westerlies prevail at all levels in winter.

The westerlies over South Africa are strongest in the south between about 30,000 and 50,000 feet. Over Cape Town/D.F. Malan they are frequently greater than 50 knots within this layer throughout the year. In winter, when the westerlies are strongest, speeds are 50 knots or more on about 80% and 75 knots or more on nearly 50% of all observations near 45,000 feet over this station; however, they rarely exceed 150 knots. The westerlies

generally decrease in speed northward, and over Maun they are strongest in autumn through spring, when speeds are frequently 50 to 75 knots between about 30,000 and 45,000 feet.

#### 8. Thunderstorms

Thunderstorms are essentially warm weather phenomena in South Africa (Figures 24 and 49). In general, they increase in frequency from the coasts toward northern portions of the plateau and toward the eastern highlands. Thunderstorm days range from but a few per year along the west and southwest coasts to more than 100 in the eastern highlands. During summer, when most places experience maximum thunderstorm activity, the northern parts of the plateau and the eastern highlands have an average of 10 to 20 thunderstorm days per month. Rainless thunderstorms are common in the

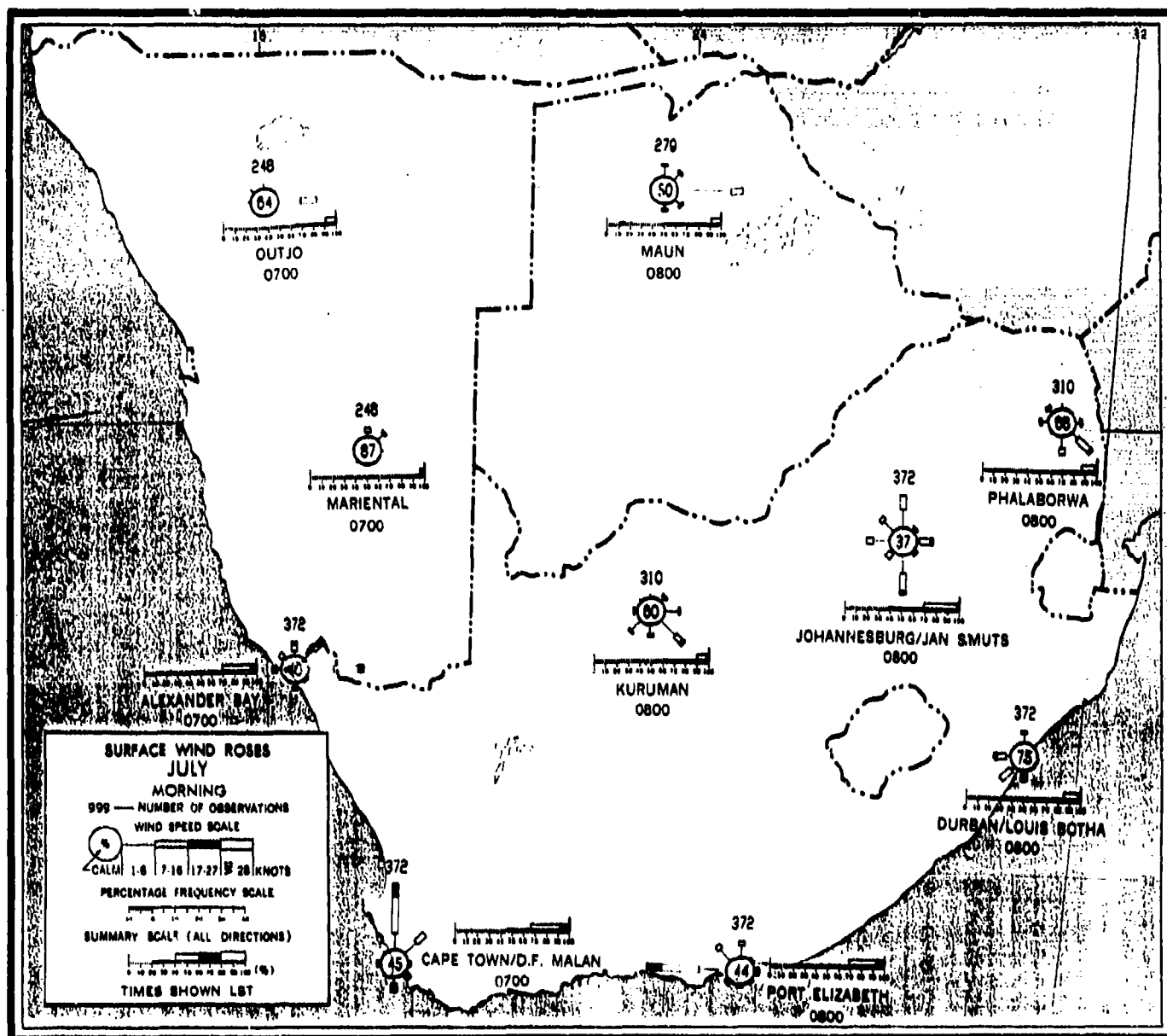


FIGURE 19. Surface wind roses in morning, July

western interior because very hot and dry surface air evaporates the rain before it reaches the ground. Hail may occur in various parts of South Africa but is most often observed in the eastern highlands, where thunderstorms are most frequent and elevations are high. In the rugged mountains near Lesotho, hail occurs on roughly 5% to 10% of the days with thunder. Hailstorms occur most frequently in late spring, when the temperature lapse rate is steepest. Although rare, tornadoes have been known to accompany thunderstorms, mostly in the eastern highlands.

#### 9. Turbulence

During summer the plateau warms rapidly during the day, setting up a turbulent exchange between the hot air near the surface and the cooler air above. By afternoon this convective overturning shows up visually as towering

cumulus clouds. If the cumulus development reaches the thunderstorm stage, the associated turbulence is usually severe and may extend to the tropopause. Turbulence is also likely when strong winds blow across mountain ranges. This is particularly noticeable over the mountains in the south and east. Clear-air turbulence is likely over the extreme south during the colder months because of the strong shearing forces near the levels of the strongest westerly winds. Turbulent conditions are usually associated with cold-front passages, which are most frequent in the south during winter.

#### D. Climatic data tables

This subsection contains selected climatic data in tabular form. Data for the primary weather elements and many of their parameters are included (Figures 25 through 49). A few tables contain data on specific

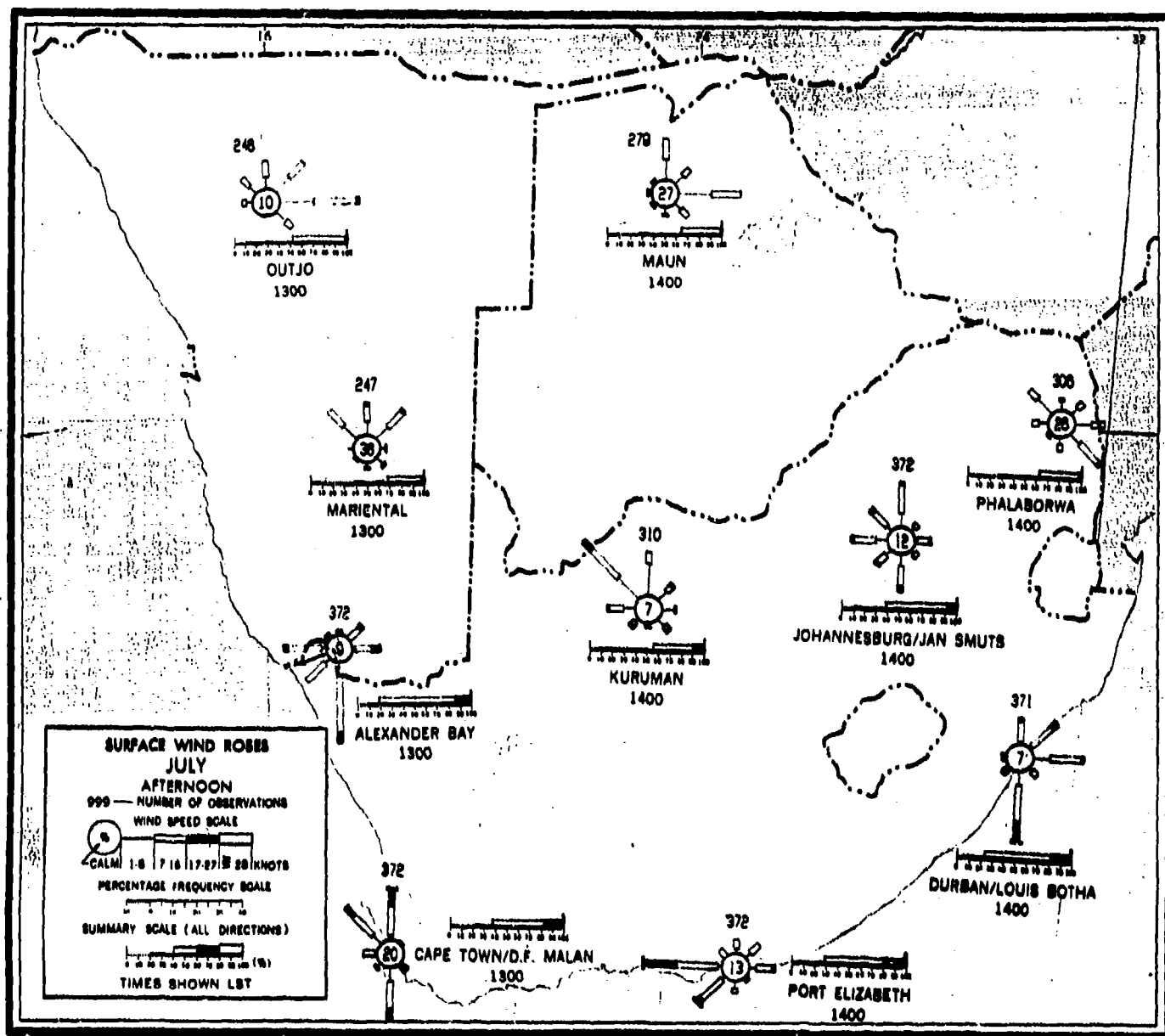


FIGURE 20. Surface wind roses in afternoon, July

weather conditions or combinations of weather elements that occur simultaneously (Figures 50 through 54). Generally, the data base is adequate for most elements, but certain limitations are evident. The density of meteorological stations is somewhat less than satisfactory in much of Botswana and South-West Africa. This is particularly true along the coast and in the highlands of South-West Africa. The length of data records is good for most stations, especially those in the Republic of South Africa, but nighttime observations are virtually absent in all the countries. Most tabular data of surface and upper-air conditions are taken from summaries compiled by electronic data processing. The surface-data summaries are based on observations during various periods from 1956 through 1967, and the upper-air summaries date from 1949 through 1967. Additional data for precipitation, temperature, and thunderstorms were

taken from various published sources. The tables represent a collection of data carefully selected to best portray the climate of South Africa, but in the textual presentations, all available data were considered. The annual values in some tables may differ slightly from the sums or means of the monthly values because of the rounding of fractions.

In order to provide as much information as possible about the tabular data base, three notations concerning the years of record are used throughout Subsection D. On those machine-processed tables which, for every station except one, were derived from 6-hourly observations averaged over a number of years, the notations POR (period of record) and CYR (composite years of record) appear under the Data Base Information column. The POR is the time span, expressed in years, during which

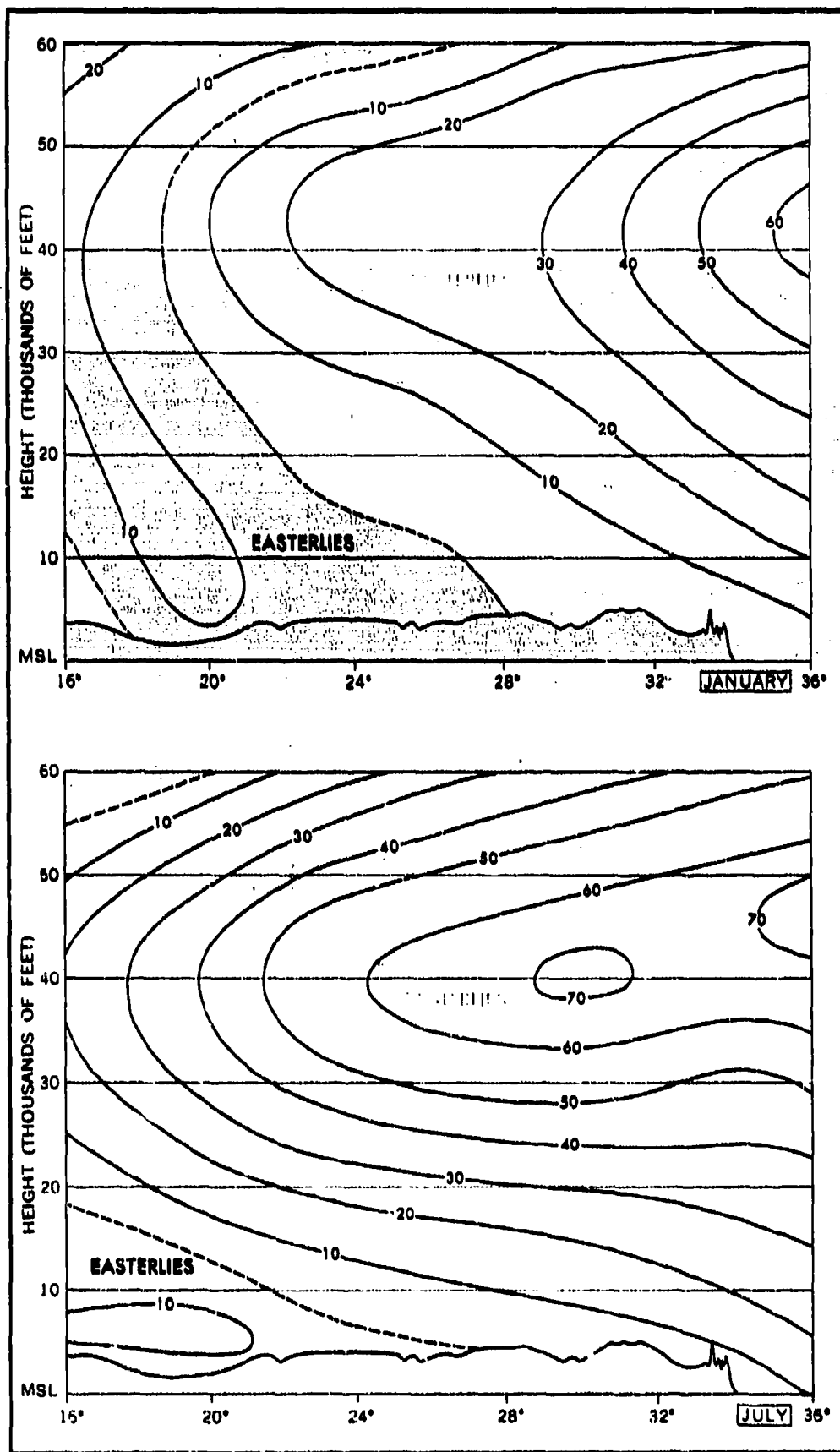


FIGURE 21. Cross section of resultant upper-air wind direction and speed (knots) along the 23rd meridian, January and July

# UPPER-AIR WIND ROSES

## MAUN

ELEVATION  
(FEET MSL)

JANUARY

APRIL

JULY

OCTOBER

94,900



71



74



46,600



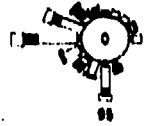
110



117



40,700



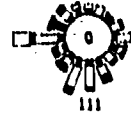
123



143



31,700



164



169



24,800



164



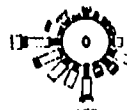
172



19,200



170



177



10,400



194



186



5,000



197



197



NUMBER OF OBSERVATIONS  
INDICATED BELOW EACH ROSE

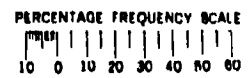


FIGURE 22. Upper-air wind roses, Maun, Botswana



# UPPER-AIR WIND ROSES CAPE TOWN/D. F. MALAN

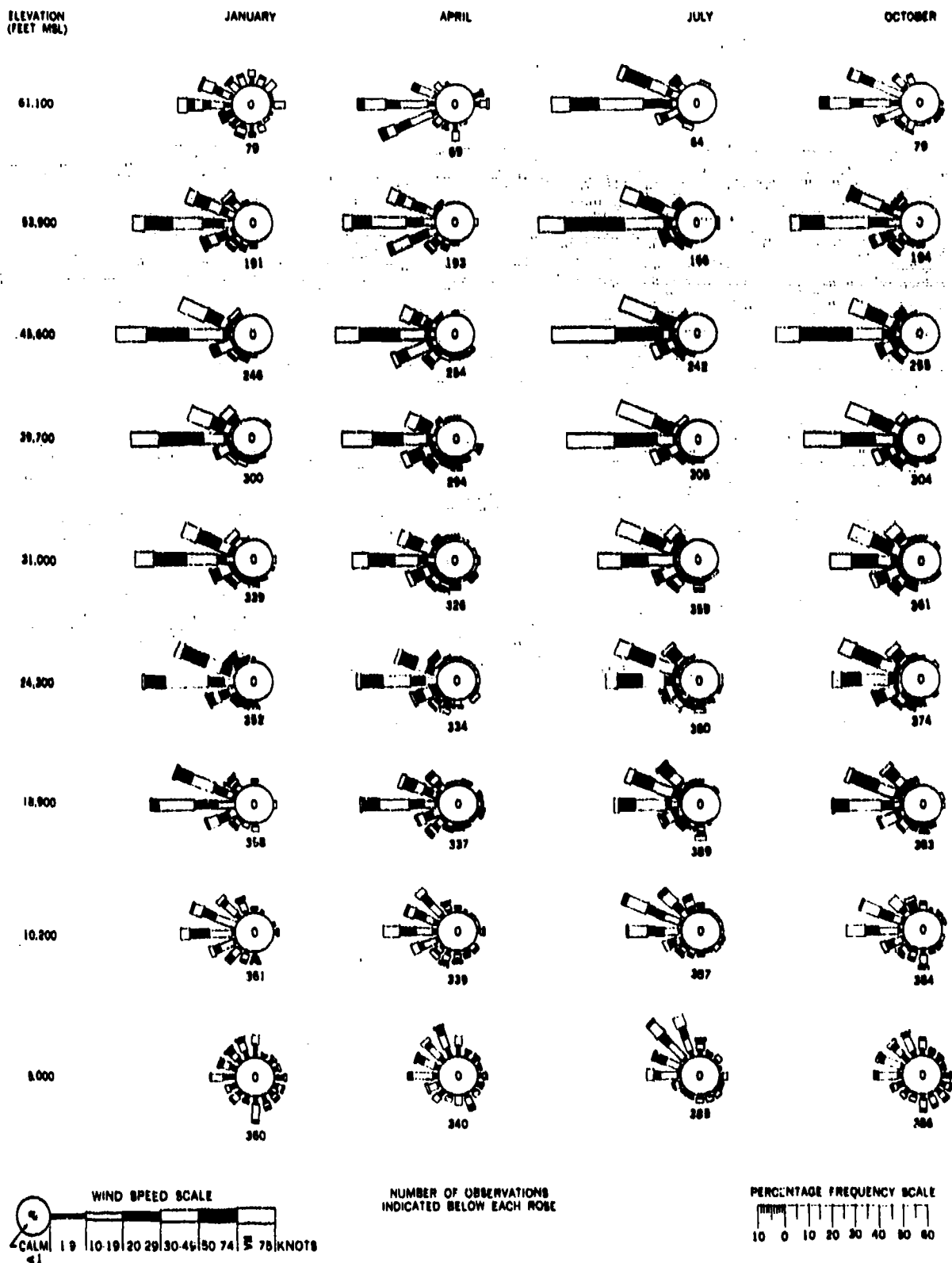


FIGURE 23. Upper-air wind roses, Cape Town/D. F. Malan, Republic of South Africa

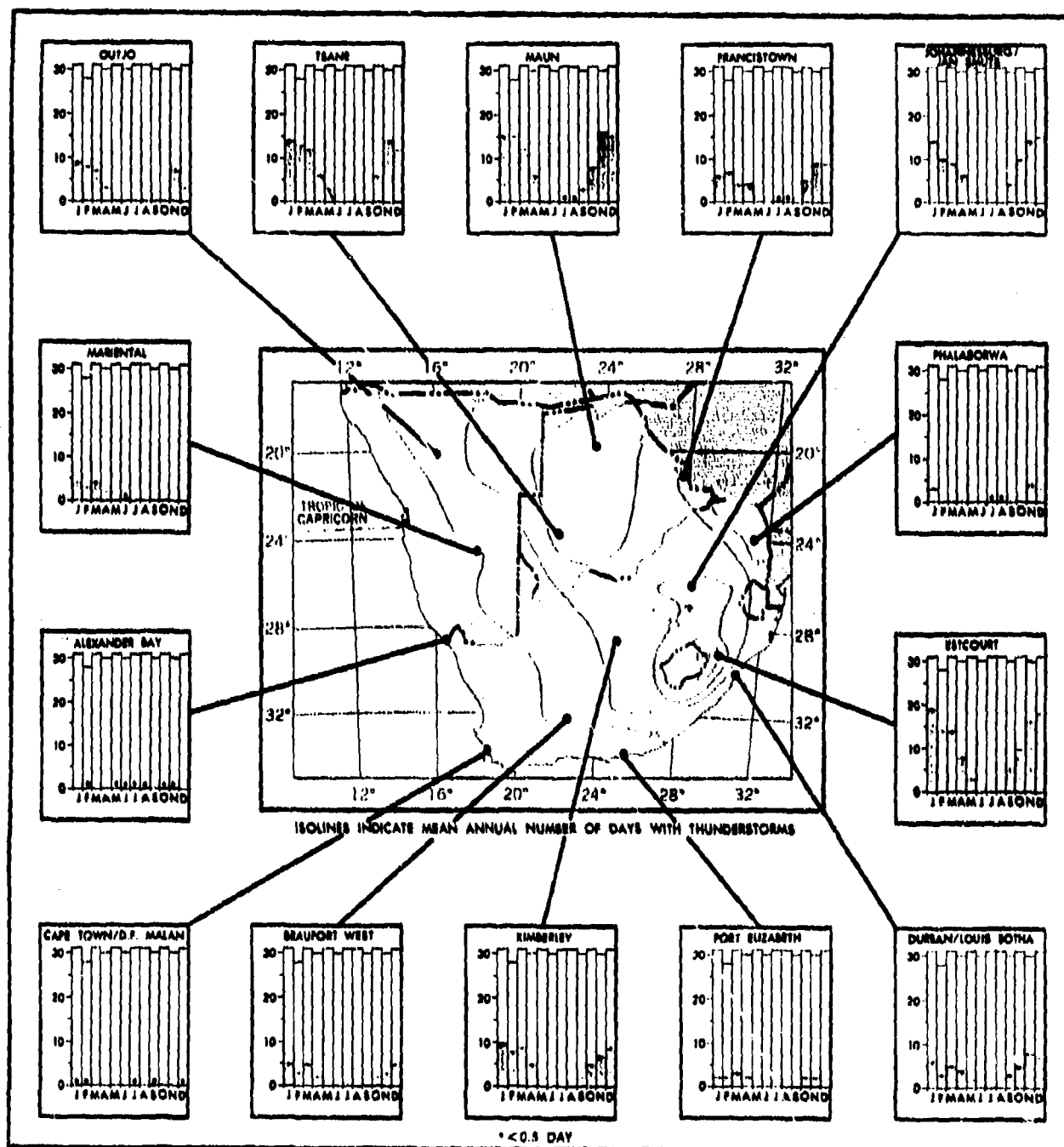


FIGURE 24. Mean number of days with thunderstorms. (For tabular data see Figure 49.)

the observations were taken and represents the total number of years considered in the data base. The CYR is obtained by totalling the observations taken at sporadic intervals during the POR and converting this total to the number of years it would have covered if the period of record had been unbroken. However, almost all of the data base for South Africa represents virtually an unbroken record, so that the POR and CYR for the

majority of the observations are identical or almost identical. On those tables consisting of data obtained from several sources, only the notation YRS REC (years of record) is used because the POR and CYR usually could not be accurately determined.

A map of station locations (Figure 55), with a list giving latitude, longitude, and elevation of meteorological stations, appears at the end of this section.

FIGURE 25. MEAN DAILY MAXIMUM TEMPERATURE (°F.)

| COUNTRY AND STATION              | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANN | YRS REC |
|----------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------|
| <b>Botswana:</b>                 |     |     |     |     |     |     |     |     |     |     |     |     |     |         |
| Francistown.....                 | 88  | 86  | 86  | 83  | 79  | 74  | 74  | 79  | 86  | 90  | 89  | 88  | 83  | 26      |
| Gaboronea.....                   | 91  | 89  | 86  | 83  | 77  | 72  | 72  | 78  | 84  | 89  | 89  | 90  | 83  | 26      |
| Ghanzi.....                      | 90  | 89  | 86  | 84  | 79  | 74  | 75  | 80  | 87  | 92  | 92  | 91  | 85  | 26      |
| Kaasane.....                     | 87  | 87  | 87  | 87  | 83  | 79  | 80  | 84  | 92  | 96  | 92  | 88  | 87  | 16      |
| Maun.....                        | 90  | 89  | 88  | 87  | 82  | 77  | 77  | 83  | 91  | 95  | 93  | 90  | 87  | 29      |
| Serowe.....                      | 86  | 85  | 83  | 81  | 77  | 71  | 71  | 76  | 83  | 88  | 87  | 86  | 81  | 30      |
| Shakawe.....                     | 88  | 88  | 88  | 86  | 81  | 77  | 77  | 83  | 91  | 96  | 90  | 89  | 86  | 5       |
| Tsahong.....                     | 94  | 93  | 89  | 83  | 76  | 71  | 71  | 77  | 84  | 89  | 92  | 94  | 84  | 16-17   |
| Tsane.....                       | 93  | 92  | 89  | 83  | 76  | 71  | 71  | 70  | 86  | 91  | 91  | 93  | 84  | 6       |
| <b>Lesotho:</b>                  |     |     |     |     |     |     |     |     |     |     |     |     |     |         |
| Maseru.....                      | 82  | 81  | 77  | 71  | 65  | 60  | 60  | 66  | 72  | 76  | 78  | 82  | 78  | 20      |
| Mekhotlong.....                  | 75  | 74  | 71  | 67  | 60  | 57  | 57  | 61  | 67  | 71  | 71  | 74  | 67  | 20      |
| Quthus Nek.....                  | 78  | 76  | 72  | 68  | 62  | 57  | 56  | 62  | 67  | 71  | 73  | 76  | 68  | 48      |
| <b>Republic of South Africa:</b> |     |     |     |     |     |     |     |     |     |     |     |     |     |         |
| Alexander Bay.....               | 75  | 75  | 75  | 74  | 71  | 70  | 69  | 68  | 70  | 70  | 73  | 74  | 72  | 12      |
| Beaufort West.....               | 90  | 88  | 83  | 75  | 69  | 64  | 65  | 68  | 74  | 78  | 84  | 88  | 77  | 11-12   |
| Bethlehem.....                   | 79  | 79  | 77  | 69  | 65  | 60  | 61  | 66  | 73  | 75  | 76  | 80  | 72  | 10-11   |
| Bloemfontein.....                | 86  | 83  | 79  | 73  | 66  | 62  | 62  | 67  | 73  | 78  | 82  | 85  | 75  | 14      |
| Calvinia.....                    | 89  | 88  | 84  | 76  | 69  | 63  | 63  | 66  | 71  | 77  | 82  | 87  | 76  | 22-23   |
| Cape Agulhas.....                | 74  | 74  | 72  | 69  | 66  | 64  | 62  | 63  | 63  | 66  | 69  | 72  | 68  | 31-32   |
| Cape Columbine.....              | 69  | 70  | 69  | 66  | 64  | 62  | 60  | 62  | 63  | 65  | 67  | 69  | 65  | 26      |
| Cape Saint Lucia.....            | 82  | 82  | 81  | 78  | 75  | 72  | 71  | 72  | 73  | 75  | 78  | 80  | 77  | 19      |
| Cape Town/D.F. Malan.....        | 79  | 79  | 77  | 73  | 67  | 64  | 64  | 64  | 67  | 70  | 75  | 78  | 71  | 11-12   |
| De Aar.....                      | 89  | 88  | 83  | 74  | 67  | 61  | 62  | 67  | 74  | 79  | 84  | 88  | 77  | 19-20   |
| Durban/Louis Botha.....          | 82  | 82  | 82  | 78  | 76  | 73  | 73  | 74  | 74  | 75  | 78  | 80  | 77  | 11-12   |
| East London.....                 | 78  | 78  | 77  | 74  | 72  | 70  | 70  | 70  | 70  | 71  | 73  | 76  | 73  | 23      |
| Entenourt.....                   | 81  | 80  | 75  | 75  | 70  | 66  | 66  | 71  | 75  | 78  | 79  | 81  | 75  | 31      |
| George.....                      | 76  | 76  | 75  | 72  | 70  | 67  | 66  | 67  | 66  | 68  | 71  | 73  | 71  | 10      |
| Goodhouse.....                   | 103 | 101 | 97  | 90  | 81  | 74  | 73  | 78  | 84  | 91  | 95  | 100 | 89  | 21      |
| Johannesburg/Jan Smuts.....      | 78  | 77  | 76  | 70  | 66  | 61  | 61  | 67  | 73  | 76  | 75  | 76  | 71  | 12      |
| Kimberley.....                   | 91  | 88  | 84  | 77  | 70  | 65  | 65  | 71  | 77  | 83  | 85  | 89  | 79  | 31      |
| Kuruman.....                     | 88  | 87  | 83  | 76  | 70  | 66  | 66  | 71  | 78  | 82  | 86  | 88  | 79  | 15-16   |
| Louis Trichardt.....             | 81  | 80  | 79  | 75  | 74  | 70  | 70  | 73  | 78  | 81  | 81  | 82  | 77  | 20      |
| Lydenburg.....                   | 78  | 78  | 77  | 71  | 69  | 64  | 64  | 70  | 75  | 75  | 75  | 77  | 73  | 5-6     |
| Macquarie.....                   | 92  | 90  | 89  | 86  | 81  | 77  | 75  | 80  | 84  | 90  | 91  | 92  | 85  | 20-21   |
| Mafeking.....                    | 87  | 84  | 82  | 78  | 72  | 68  | 67  | 73  | 80  | 85  | 85  | 86  | 79  | 29-30   |
| Marnitz.....                     | 85  | 86  | 85  | 82  | 77  | 73  | 73  | 78  | 84  | 87  | 88  | 89  | 82  | 15-19   |
| Matroosberg.....                 | 82  | 82  | 78  | 71  | 64  | 59  | 57  | 60  | 64  | 70  | 75  | 80  | 70  | 29-30   |
| Middelburg.....                  | 85  | 84  | 79  | 72  | 66  | 61  | 60  | 66  | 71  | 75  | 80  | 85  | 74  | 31      |
| Newcastle.....                   | 83  | 82  | 80  | 77  | 73  | 68  | 68  | 74  | 78  | 81  | 82  | 84  | 77  | 20      |
| Okiep.....                       | 87  | 87  | 84  | 77  | 70  | 64  | 63  | 66  | 70  | 75  | 80  | 85  | 76  | 32-33   |
| Phalaborwa.....                  | 80  | 88  | 88  | 84  | 82  | 77  | 77  | 80  | 84  | 87  | 87  | 88  | 84  | 9-10    |
| Pietersburg.....                 | 82  | 82  | 80  | 76  | 73  | 68  | 68  | 72  | 78  | 81  | 81  | 80  | 77  | 11-12   |
| Pilot Relief.....                | 78  | 78  | 77  | 74  | 71  | 67  | 66  | 70  | 74  | 76  | 76  | 78  | 73  | 31-32   |
| Port Elisabeth.....              | 78  | 78  | 76  | 73  | 71  | 68  | 67  | 68  | 68  | 70  | 72  | 75  | 72  | 26      |
| Port Saint Johns.....            | 77  | 78  | 76  | 75  | 74  | 72  | 71  | 70  | 71  | 72  | 73  | 76  | 74  | 31-32   |
| Pretoria.....                    | 81  | 81  | 78  | 75  | 70  | 66  | 66  | 71  | 77  | 80  | 80  | 82  | 76  | 13      |
| Queenstown.....                  | 85  | 84  | 82  | 75  | 70  | 66  | 64  | 69  | 74  | 78  | 80  | 84  | 76  | 24-25   |
| Rheepun.....                     | 79  | 79  | 78  | 71  | 69  | 63  | 64  | 69  | 74  | 74  | 75  | 80  | 73  | 5-6     |
| Somerset East.....               | 85  | 84  | 81  | 77  | 71  | 67  | 66  | 70  | 73  | 76  | 79  | 83  | 76  | 20      |
| Standerton.....                  | 83  | 81  | 80  | 75  | 70  | 65  | 65  | 70  | 75  | 79  | 80  | 82  | 75  | 37      |
| Uppington.....                   | 96  | 94  | 90  | 81  | 74  | 69  | 70  | 74  | 81  | 85  | 91  | 95  | 83  | 12      |
| Vanwykville.....                 | 94  | 93  | 87  | 79  | 72  | 66  | 65  | 71  | 74  | 83  | 87  | 92  | 80  | 20      |
| Walvis Bay.....                  | 73  | 74  | 74  | 75  | 74  | 74  | 70  | 67  | 66  | 67  | 71  | 72  | 71  | 35      |
| Wepener.....                     | 85  | 83  | 80  | 73  | 66  | 62  | 62  | 67  | 74  | 78  | 80  | 84  | 74  | 32-33   |
| Willowmore.....                  | 87  | 86  | 81  | 74  | 67  | 62  | 61  | 66  | 70  | 75  | 80  | 84  | 75  | 40-41   |
| <b>South-West Africa:</b>        |     |     |     |     |     |     |     |     |     |     |     |     |     |         |
| Gobabis.....                     | 90  | 87  | 84  | 81  | 76  | 72  | 72  | 77  | 84  | 88  | 89  | 91  | 83  | 38      |
| Keetmanshoop.....                | 95  | 93  | 90  | 82  | 76  | 69  | 71  | 76  | 83  | 86  | 92  | 95  | 84  | 9-10    |
| Mariental.....                   | 95  | 93  | 90  | 84  | 78  | 71  | 73  | 78  | 86  | 89  | 92  | 96  | 85  | 8       |
| Ondangua.....                    | 90  | 88  | 87  | 85  | 84  | 79  | 80  | 85  | 91  | 94  | 92  | 90  | 87  | 7       |
| Outjo.....                       | 90  | 88  | 87  | 84  | 81  | 76  | 77  | 82  | 89  | 91  | 89  | 91  | 85  | 7-8     |
| Tauneh.....                      | 88  | 86  | 85  | 83  | 80  | 76  | 76  | 81  | 89  | 92  | 90  | 89  | 85  | 37      |
| Windhoek.....                    | 85  | 83  | 80  | 76  | 72  | 68  | 68  | 74  | 80  | 84  | 84  | 87  | 78  | 39-40   |
| <b>Swaziland:</b>                |     |     |     |     |     |     |     |     |     |     |     |     |     |         |
| Mbabane.....                     | 77  | 76  | 75  | 74  | 70  | 66  | 67  | 70  | 73  | 75  | 76  | 77  | 73  | 20      |
| Ntlegi.....                      | 81  | 81  | 78  | 77  | 74  | 70  | 70  | 73  | 76  | 78  | 79  | 80  | 76  | 14      |

FIGURE 26. MEAN DAILY MINIMUM TEMPERATURE (°F.)

| COUNTRY AND STATION              | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANN | YRS REC |
|----------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------|
| <b>Botswana:</b>                 |     |     |     |     |     |     |     |     |     |     |     |     |     |         |
| Francistown.....                 | 65  | 64  | 61  | 56  | 48  | 41  | 41  | 46  | 54  | 61  | 64  | 65  | 55  | 26      |
| Gaborone.....                    | 64  | 64  | 61  | 53  | 43  | 36  | 36  | 40  | 49  | 58  | 62  | 63  | 52  | 26      |
| Ghanzi.....                      | 64  | 64  | 61  | 55  | 45  | 39  | 38  | 44  | 51  | 59  | 63  | 64  | 54  | 26      |
| Kaasane.....                     | 65  | 65  | 64  | 51  | 54  | 48  | 47  | 51  | 59  | 65  | 67  | 65  | 59  | 16      |
| Maun.....                        | 66  | 66  | 64  | 58  | 49  | 42  | 43  | 47  | 56  | 65  | 66  | 66  | 57  | 29      |
| Serowe.....                      | 63  | 62  | 60  | 53  | 45  | 39  | 38  | 42  | 50  | 58  | 62  | 64  | 53  | 30      |
| Shakawe.....                     | 67  | 66  | 65  | 60  | 49  | 42  | 42  | 47  | 54  | 63  | 65  | 66  | 57  | 5       |
| Tlokgeng.....                    | 65  | 65  | 61  | 51  | 41  | 34  | 34  | 39  | 46  | 54  | 60  | 64  | 51  | 16 17   |
| Tsane.....                       | 65  | 66  | 63  | 54  | 42  | 37  | 37  | 42  | 51  | 58  | 63  | 65  | 53  | 6       |
| <b>Lesotho:</b>                  |     |     |     |     |     |     |     |     |     |     |     |     |     |         |
| Maseru.....                      | 58  | 57  | 54  | 47  | 38  | 32  | 32  | 36  | 43  | 49  | 53  | 56  | 46  | 20      |
| Mokhotlong.....                  | 49  | 48  | 45  | 39  | 31  | 25  | 24  | 29  | 36  | 42  | 45  | 47  | 38  | 20      |
| Quthus Nek.....                  | 53  | 53  | 51  | 46  | 40  | 34  | 34  | 38  | 43  | 47  | 49  | 52  | 45  | 48      |
| <b>Republic of South Africa:</b> |     |     |     |     |     |     |     |     |     |     |     |     |     |         |
| Alexander Bay.....               | 59  | 59  | 57  | 54  | 50  | 50  | 48  | 48  | 50  | 53  | 55  | 58  | 53  | 12      |
| Beaufort West.....               | 61  | 60  | 58  | 51  | 45  | 42  | 42  | 45  | 46  | 50  | 55  | 59  | 51  | 11-12   |
| Bethlehem.....                   | 56  | 55  | 52  | 44  | 36  | 28  | 27  | 31  | 41  | 46  | 52  | 54  | 43  | 10-11   |
| Bloemfontein.....                | 60  | 59  | 56  | 47  | 39  | 33  | 33  | 38  | 43  | 50  | 54  | 58  | 47  | 14      |
| Calvinia.....                    | 57  | 55  | 53  | 47  | 42  | 39  | 38  | 39  | 42  | 45  | 50  | 54  | 47  | 22-23   |
| Cape Agulhas.....                | 63  | 64  | 62  | 58  | 55  | 52  | 50  | 51  | 53  | 55  | 58  | 61  | 57  | 32      |
| Cape Columbine.....              | 56  | 56  | 56  | 54  | 53  | 51  | 50  | 50  | 50  | 53  | 54  | 55  | 55  | 25-26   |
| Cape Saint Lucia.....            | 70  | 70  | 69  | 66  | 61  | 57  | 57  | 59  | 62  | 61  | 66  | 68  | 64  | 18-19   |
| Cape Town/D.F. Malan.....        | 60  | 59  | 57  | 52  | 48  | 45  | 44  | 45  | 47  | 50  | 55  | 59  | 52  | 11-12   |
| De Aar.....                      | 61  | 59  | 56  | 47  | 39  | 34  | 32  | 37  | 42  | 48  | 54  | 58  | 47  | 19-20   |
| Durban/Louis Botha.....          | 69  | 69  | 68  | 62  | 55  | 49  | 49  | 53  | 58  | 62  | 65  | 67  | 61  | 11-12   |
| East London.....                 | 64  | 65  | 64  | 59  | 55  | 51  | 50  | 52  | 55  | 58  | 60  | 62  | 58  | 11      |
| Estcourt.....                    | 59  | 59  | 57  | 51  | 43  | 37  | 37  | 41  | 47  | 52  | 55  | 58  | 49  | 31      |
| George.....                      | 59  | 59  | 58  | 53  | 51  | 47  | 46  | 47  | 48  | 51  | 54  | 56  | 52  | 10      |
| Goodhouse.....                   | 71  | 71  | 68  | 62  | 52  | 45  | 43  | 47  | 54  | 60  | 64  | 69  | 59  | 21      |
| Johannesburg/Jan Smuts.....      | 57  | 58  | 55  | 51  | 45  | 40  | 40  | 43  | 49  | 52  | 55  | 56  | 50  | 12      |
| Kimberley.....                   | 64  | 63  | 59  | 52  | 44  | 37  | 37  | 41  | 48  | 54  | 58  | 62  | 51  | 31      |
| Kuruman.....                     | 61  | 60  | 57  | 49  | 40  | 35  | 34  | 37  | 45  | 51  | 56  | 60  | 49  | 15-16   |
| Louis Trichardt.....             | 63  | 62  | 60  | 56  | 49  | 43  | 44  | 47  | 53  | 58  | 60  | 62  | 55  | 20      |
| Lydenburg.....                   | 59  | 58  | 54  | 50  | 42  | 37  | 36  | 40  | 47  | 51  | 56  | 57  | 49  | 5-6     |
| Macoville.....                   | 69  | 67  | 67  | 59  | 50  | 44  | 44  | 48  | 55  | 62  | 65  | 66  | 58  | 20-21   |
| Mafeking.....                    | 62  | 61  | 58  | 52  | 43  | 37  | 37  | 42  | 49  | 56  | 59  | 61  | 51  | 28-30   |
| Marnitz.....                     | 66  | 66  | 63  | 58  | 49  | 43  | 43  | 47  | 55  | 62  | 65  | 65  | 57  | 18-19   |
| Matroosberg.....                 | 53  | 54  | 51  | 46  | 42  | 38  | 37  | 38  | 40  | 44  | 48  | 51  | 45  | 29-30   |
| Middelburg.....                  | 55  | 54  | 51  | 44  | 38  | 32  | 31  | 34  | 39  | 44  | 49  | 52  | 43  | 31      |
| Newcastle.....                   | 50  | 50  | 56  | 49  | 40  | 35  | 35  | 41  | 47  | 53  | 56  | 58  | 49  | 20      |
| Okiep.....                       | 60  | 61  | 58  | 54  | 49  | 45  | 43  | 44  | 46  | 50  | 55  | 57  | 52  | 31-33   |
| Phalaborwa.....                  | 69  | 68  | 66  | 63  | 55  | 50  | 50  | 54  | 59  | 64  | 67  | 68  | 61  | 9-10    |
| Pietersburg.....                 | 62  | 62  | 59  | 54  | 46  | 41  | 40  | 43  | 50  | 56  | 60  | 61  | 53  | 11-12   |
| Piet Retief.....                 | 59  | 58  | 56  | 51  | 45  | 39  | 39  | 43  | 48  | 53  | 56  | 58  | 50  | 31-32   |
| Port Elizabeth.....              | 62  | 62  | 61  | 56  | 50  | 46  | 46  | 48  | 51  | 54  | 57  | 60  | 54  | 26      |
| Port Saint Johns.....            | 67  | 68  | 67  | 64  | 61  | 57  | 56  | 57  | 59  | 61  | 63  | 65  | 62  | 32      |
| Pretoria.....                    | 60  | 60  | 57  | 50  | 42  | 37  | 37  | 42  | 49  | 55  | 57  | 60  | 50  | 13      |
| Queenstown.....                  | 58  | 58  | 56  | 49  | 43  | 37  | 37  | 40  | 45  | 49  | 53  | 56  | 49  | 25-27   |
| Sheeprun.....                    | 58  | 57  | 55  | 47  | 39  | 33  | 33  | 35  | 40  | 45  | 50  | 53  | 47  | 5-6     |
| Somerant East.....               | 58  | 59  | 57  | 53  | 48  | 43  | 43  | 44  | 47  | 50  | 54  | 56  | 51  | 20      |
| Standerton.....                  | 55  | 54  | 51  | 43  | 34  | 26  | 26  | 31  | 39  | 47  | 51  | 55  | 43  | 37      |
| Uppington.....                   | 68  | 66  | 64  | 54  | 45  | 39  | 39  | 42  | 49  | 54  | 62  | 66  | 54  | 12      |
| Vanwykville.....                 | 64  | 63  | 59  | 50  | 42  | 36  | 34  | 37  | 43  | 50  | 56  | 60  | 49  | 20      |
| Walvis Bay.....                  | 59  | 60  | 59  | 55  | 52  | 48  | 47  | 46  | 48  | 51  | 54  | 57  | 53  | 35      |
| Wepener.....                     | 58  | 58  | 53  | 45  | 37  | 30  | 30  | 34  | 41  | 48  | 52  | 56  | 45  | 32-33   |
| Willowmore.....                  | 56  | 57  | 54  | 48  | 40  | 35  | 34  | 37  | 42  | 47  | 51  | 55  | 46  | 40-41   |
| <b>South-West Africa:</b>        |     |     |     |     |     |     |     |     |     |     |     |     |     |         |
| Gobabis.....                     | 63  | 62  | 59  | 52  | 43  | 37  | 36  | 41  | 48  | 56  | 59  | 62  | 51  | 38      |
| Keetmanshoop.....                | 65  | 65  | 63  | 56  | 50  | 44  | 44  | 47  | 52  | 55  | 61  | 64  | 55  | 9-10    |
| Mariental.....                   | 69  | 69  | 65  | 56  | 48  | 42  | 41  | 45  | 53  | 59  | 65  | 68  | 57  | 8       |
| Ondangua.....                    | 67  | 66  | 65  | 62  | 55  | 45  | 43  | 47  | 55  | 61  | 64  | 66  | 58  | 7       |
| Outjo.....                       | 63  | 63  | 62  | 57  | 48  | 42  | 43  | 46  | 52  | 57  | 61  | 63  | 55  | 7 8     |
| Tsumeb.....                      | 66  | 65  | 63  | 59  | 52  | 47  | 47  | 51  | 60  | 66  | 66  | 66  | 59  | 37      |
| Windhoek.....                    | 63  | 62  | 60  | 55  | 48  | 44  | 43  | 47  | 54  | 58  | 60  | 62  | 55  | 39-40   |
| <b>Nyasaland:</b>                |     |     |     |     |     |     |     |     |     |     |     |     |     |         |
| Mbabane.....                     | 50  | 50  | 57  | 53  | 47  | 42  | 42  | 45  | 49  | 54  | 56  | 58  | 52  | 20      |
| Ntngi.....                       | 62  | 63  | 61  | 59  | 55  | 51  | 50  | 52  | 53  | 56  | 58  | 61  | 57  | 14      |

FIGURE 27. ABSOLUTE MAXIMUM TEMPERATURE (°F.)

| COUNTRY AND STATION              | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANN | YRS REC |
|----------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------|
| <b>Botswana:</b>                 |     |     |     |     |     |     |     |     |     |     |     |     |     |         |
| Francistown                      | 104 | 103 | 100 | 96  | 94  | 88  | 89  | 95  | 100 | 105 | 107 | 108 | 107 | 36      |
| Gaborone                         | 107 | 103 | 99  | 96  | 92  | 85  | 85  | 92  | 100 | 105 | 105 | 111 | 111 | 26      |
| Ghanai                           | 107 | 111 | 106 | 98  | 91  | 90  | 88  | 100 | 104 | 104 | 108 | 108 | 111 | 26      |
| Kasane                           | 100 | 99  | 98  | 99  | 98  | 89  | 91  | 96  | 103 | 106 | 105 | 105 | 108 | 26      |
| Maun                             | 104 | 103 | 102 | 99  | 96  | 92  | 90  | 97  | 101 | 109 | 110 | 108 | 110 | 39      |
| Serowe                           | 104 | 102 | 99  | 96  | 91  | 88  | 89  | 92  | 100 | 103 | 104 | 104 | 104 | 30      |
| Shakawe                          | 100 | 100 | 98  | 97  | 89  | 86  | 86  | 94  | 100 | 103 | 100 | 100 | 103 | 5       |
| Taabong                          | 107 | 106 | 101 | 96  | 88  | 86  | 84  | 91  | 98  | 103 | 105 | 106 | 107 | 16-17   |
| Tsane                            | 105 | 104 | 99  | 95  | 87  | 83  | 80  | 91  | 96  | 101 | 104 | 105 | 105 | 6       |
| <b>Lesotho:</b>                  |     |     |     |     |     |     |     |     |     |     |     |     |     |         |
| Maseru                           | 98  | 96  | 92  | 87  | 81  | 74  | 71  | 80  | 88  | 94  | 94  | 95  | 98  | 20      |
| Mokhotlong                       | 91  | 95  | 83  | 78  | 78  | 71  | 73  | 76  | 80  | 87  | 87  | 92  | 95  | 20      |
| Quehas Nek                       | 93  | 93  | 92  | 89  | 79  | 75  | 76  | 81  | 88  | 91  | 92  | 93  | 95  | 48      |
| <b>Republic of South Africa:</b> |     |     |     |     |     |     |     |     |     |     |     |     |     |         |
| Alexander Bay                    | 98  | 98  | 102 | 106 | 98  | 90  | 91  | 96  | 100 | 103 | 102 | 102 | 106 | 12      |
| Beaufort West                    | 108 | 103 | 103 | 96  | 90  | 78  | 82  | 93  | 96  | 102 | 106 | 105 | 108 | 11-12   |
| Bethlehem                        | 93  | 92  | 88  | 84  | 79  | 72  | 72  | 80  | 94  | 93  | 91  | 94  | 94  | 10-11   |
| Bloemfontein                     | 100 | 96  | 93  | 88  | 81  | 78  | 73  | 80  | 90  | 94  | 94  | 98  | 100 | 14      |
| Calvinia                         | 106 | 105 | 104 | 95  | 88  | 78  | 83  | 89  | 98  | 105 | 102 | 104 | 106 | 22-23   |
| Cape Agulhas                     | 85  | 97  | 95  | 96  | 93  | 86  | 85  | 89  | 90  | 79  | 87  | 87  | 97  | 41-42   |
| Cape Columbine                   | 92  | 94  | 98  | 97  | 88  | 82  | 80  | 82  | 88  | 92  | 95  | 91  | 95  | 26      |
| Cape Saint Lucia                 | 99  | 96  | 95  | 94  | 87  | 87  | 87  | 93  | 92  | 101 | 95  | 102 | 102 | 41      |
| Cape Town/D.F. Malan             | 101 | 99  | 98  | 101 | 92  | 83  | 84  | 88  | 97  | 96  | 94  | 99  | 101 | 11-12   |
| De Aar                           | 105 | 101 | 98  | 91  | 81  | 81  | 77  | 83  | 93  | 99  | 100 | 105 | 108 | 19-20   |
| Durban/Louis Botha               | 94  | 92  | 92  | 91  | 89  | 87  | 89  | 91  | 95  | 91  | 94  | 92  | 95  | 11-12   |
| East London                      | 96  | 99  | 94  | 97  | 96  | 89  | 92  | 100 | 106 | 103 | 98  | 97  | 106 | 23      |
| Estcourt                         | 102 | 98  | 95  | 91  | 86  | 81  | 80  | 86  | 95  | 100 | 100 | 99  | 102 | 41      |
| George                           | 106 | 99  | 106 | 102 | 91  | 87  | 86  | 89  | 94  | 100 | 92  | 102 | 106 | 10      |
| Goodhouse                        | 118 | 115 | 111 | 107 | 99  | 89  | 86  | 100 | 108 | 113 | 114 | 117 | 118 | 21      |
| Johannesburg/Jan Smuts           | 91  | 88  | 86  | 82  | 79  | 72  | 74  | 84  | 86  | 90  | 88  | 89  | 91  | 12      |
| Kimberley                        | 103 | 101 | 97  | 93  | 86  | 82  | 79  | 88  | 94  | 100 | 102 | 103 | 103 | 31      |
| Kuruman                          | 104 | 100 | 96  | 88  | 84  | 78  | 76  | 85  | 91  | 97  | 99  | 101 | 104 | 15-16   |
| Louis Trichardt                  | 100 | 98  | 99  | 94  | 90  | 86  | 86  | 91  | 99  | 102 | 104 | 107 | 107 | 30      |
| Lydenburg                        | 86  | 89  | 87  | 84  | 79  | 74  | 76  | 82  | 88  | 91  | 85  | 89  | 91  | 5-6     |
| Macquarie                        | 112 | 103 | 105 | 103 | 97  | 92  | 91  | 98  | 103 | 109 | 111 | 109 | 112 | 20-21   |
| Mafeking                         | 102 | 99  | 96  | 91  | 87  | 83  | 81  | 87  | 96  | 100 | 103 | 101 | 103 | 34-35   |
| Marnitz                          | 102 | 103 | 101 | 96  | 92  | 85  | 88  | 93  | 99  | 103 | 104 | 103 | 104 | 18-19   |
| Matroosberg                      | 99  | 100 | 98  | 90  | 83  | 73  | 73  | 84  | 87  | 98  | 93  | 100 | 100 | 29-30   |
| Middelburg                       | 102 | 101 | 96  | 94  | 82  | 78  | 78  | 87  | 99  | 97  | 103 | 101 | 103 | 41      |
| Newcastle                        | 102 | 100 | 96  | 90  | 90  | 82  | 83  | 89  | 97  | 100 | 103 | 103 | 103 | 30      |
| Okiep                            | 103 | 103 | 101 | 98  | 90  | 83  | 78  | 88  | 95  | 102 | 100 | 101 | 103 | 42-43   |
| Phalaborwa                       | 106 | 105 | 104 | 100 | 99  | 91  | 87  | 98  | 105 | 113 | 113 | 106 | 113 | 9-10    |
| Pietersburg                      | 92  | 95  | 91  | 88  | 87  | 80  | 79  | 89  | 93  | 98  | 97  | 94  | 98  | 11-12   |
| Piet Retief                      | 94  | 96  | 94  | 91  | 87  | 81  | 84  | 91  | 96  | 97  | 97  | 97  | 97  | 31-32   |
| Port Elizabeth                   | 102 | 104 | 104 | 101 | 95  | 87  | 90  | 98  | 103 | 97  | 104 | 96  | 104 | 26      |
| Port Saint Johns                 | 89  | 91  | 92  | 94  | 94  | 91  | 93  | 97  | 103 | 104 | 100 | 92  | 104 | 40-42   |
| Pretoria                         | 95  | 91  | 91  | 83  | 80  | 78  | 75  | 83  | 89  | 92  | 95  | 95  | 96  | 13      |
| Queenstown                       | 105 | 100 | 99  | 93  | 88  | 79  | 79  | 88  | 95  | 100 | 100 | 104 | 105 | 34-35   |
| Sheeprun                         | 101 | 98  | 94  | 85  | 86  | 78  | 78  | 87  | 91  | 95  | 102 | 98  | 102 | 5-6     |
| Stromers East                    | 107 | 109 | 101 | 100 | 91  | 82  | 84  | 93  | 95  | 102 | 103 | 107 | 109 | 30      |
| Standerton                       | 99  | 94  | 90  | 89  | 86  | 77  | 79  | 86  | 94  | 94  | 94  | 99  | 99  | 37      |
| Uplington                        | 108 | 106 | 102 | 97  | 91  | 81  | 85  | 92  | 99  | 105 | 108 | 107 | 108 | 12      |
| Vanwykville                      | 107 | 107 | 101 | 95  | 88  | 81  | 80  | 88  | 97  | 101 | 105 | 107 | 107 | 25      |
| Walvis Bay                       | 100 | 97  | 97  | 103 | 104 | 97  | 98  | 99  | 100 | 97  | 95  | 91  | 104 | 35      |
| Wepener                          | 101 | 98  | 95  | 89  | 81  | 80  | 77  | 82  | 89  | 94  | 96  | 99  | 101 | 39-40   |
| Willowmore                       | 108 | 108 | 106 | 96  | 88  | 78  | 85  | 87  | 97  | 101 | 103 | 106 | 108 | 40-41   |
| <b>South-West Africa:</b>        |     |     |     |     |     |     |     |     |     |     |     |     |     |         |
| Gobabis                          | 102 | 99  | 97  | 93  | 88  | 82  | 82  | 92  | 96  | 99  | 100 | 101 | 102 | 38      |
| Ketmanshoop                      | 106 | 103 | 101 | 98  | 90  | 82  | 83  | 93  | 98  | 104 | 106 | 106 | 106 | 9-10    |
| Mariental                        | 105 | 103 | 100 | 97  | 91  | 82  | 84  | 92  | 96  | 102 | 104 | 105 | 105 | 8       |
| Ondangua                         | 101 | 99  | 99  | 98  | 96  | 86  | 86  | 93  | 99  | 100 | 102 | 101 | 102 | 7       |
| Outjo                            | 99  | 98  | 95  | 94  | 87  | 82  | 84  | 92  | 96  | 99  | 100 | 100 | 100 | 7-8     |
| Tauneh                           | 96  | 94  | 91  | 89  | 86  | 81  | 82  | 88  | 95  | 98  | 97  | 96  | 98  | 35      |
| Windhoek                         | 97  | 94  | 94  | 87  | 89  | 79  | 77  | 85  | 91  | 93  | 96  | 97  | 97  | 39-40   |
| <b>Swaziland:</b>                |     |     |     |     |     |     |     |     |     |     |     |     |     |         |
| Mbabane                          | 92  | 95  | 92  | 92  | 85  | 85  | 91  | 89  | 99  | 96  | 96  | 97  | 99  | 20      |
| Negel                            | 100 | 97  | 93  | 93  | 91  | 83  | 86  | 95  | 95  | 98  | 100 | 98  | 100 | 14      |

FIGURE 28. ABSOLUTE MINIMUM TEMPERATURE (°F.)

| COUNTRY AND STATION              | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANN | TRE RBC |
|----------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------|
| <b>Botswana:</b>                 |     |     |     |     |     |     |     |     |     |     |     |     |     |         |
| Francistown.....                 | 48  | 48  | 48  | 31  | 28  | 24  | 27  | 27  | 31  | 41  | 44  | 50  | 24  | 36      |
| Gaborone.....                    | 47  | 48  | 44  | 28  | 25  | 22  | 20  | 24  | 24  | 32  | 41  | 42  | 20  | 33      |
| Ghanzi.....                      | 44  | 44  | 40  | 31  | 21  | 20  | 16  | 22  | 29  | 34  | 42  | 45  | 18  | 26      |
| Kasane.....                      | 55  | 52  | 50  | 44  | 37  | 31  | 32  | 35  | 39  | 48  | 49  | 52  | 31  | 23      |
| Maun.....                        | 48  | 48  | 50  | 38  | 29  | 22  | 25  | 24  | 31  | 43  | 49  | 52  | 22  | 39      |
| Serowe.....                      | 45  | 45  | 40  | 33  | 28  | 19  | 24  | 22  | 30  | 40  | 41  | 41  | 19  | 30      |
| Shakawe.....                     | 55  | 54  | 54  | 45  | 33  | 28  | 31  | 30  | 40  | 51  | 51  | 57  | 28  | 5       |
| Taobong.....                     | 44  | 47  | 42  | 24  | 20  | 16  | 15  | 17  | 21  | 27  | 39  | 42  | 15  | 10-17   |
| Tsane.....                       | 48  | 54  | 44  | 32  | 26  | 23  | 20  | 24  | 30  | 36  | 47  | 53  | 20  | 6       |
| <b>Lesotho:</b>                  |     |     |     |     |     |     |     |     |     |     |     |     |     |         |
| Maseru.....                      | 49  | 40  | 35  | 28  | 17  | 14  | 18  | 19  | 25  | 28  | 34  | 38  | 14  | 20      |
| Mokhotlong.....                  | 36  | 34  | 31  | 21  | 11  | 11  | 10  | 10  | 18  | 20  | 26  | 32  | 10  | 20      |
| Quthus Nek.....                  | 32  | 32  | 33  | 20  | 21  | 15  | 14  | 18  | 15  | 17  | 28  | 35  | 14  | 48      |
| <b>Republic of South Africa:</b> |     |     |     |     |     |     |     |     |     |     |     |     |     |         |
| Alexander Bay.....               | 50  | 49  | 47  | 44  | 40  | 37  | 37  | 35  | 39  | 42  | 47  | 47  | 38  | 12      |
| Beaufort West.....               | 44  | 45  | 40  | 33  | 28  | 24  | 24  | 23  | 27  | 34  | 37  | 43  | 23  | 11-12   |
| Bethlehem.....                   | 39  | 41  | 33  | 28  | 22  | 18  | 12  | 18  | 21  | 27  | 37  | 42  | 12  | 10-11   |
| Bloemfontein.....                | 43  | 39  | 37  | 28  | 22  | 16  | 17  | 16  | 21  | 28  | 36  | 37  | 16  | 14      |
| Calvinia.....                    | 37  | 33  | 35  | 29  | 26  | 21  | 19  | 21  | 22  | 26  | 33  | 34  | 19  | 22-23   |
| Cape Agulhas.....                | 47  | 48  | 49  | 40  | 40  | 40  | 39  | 40  | 40  | 41  | 41  | 41  | 39  | 42      |
| Cape Columbine.....              | 43  | 47  | 41  | 43  | 40  | 39  | 40  | 40  | 40  | 38  | 39  | 41  | 38  | 28-28   |
| Cape Saint Lucia.....            | 54  | 55  | 55  | 53  | 48  | 45  | 42  | 44  | 47  | 50  | 52  | 57  | 42  | 40-41   |
| Cape Town/D.F. Malan.....        | 46  | 46  | 40  | 36  | 34  | 30  | 30  | 31  | 32  | 34  | 42  | 46  | 30  | 11-12   |
| De Aar.....                      | 42  | 39  | 38  | 26  | 23  | 18  | 14  | 19  | 18  | 28  | 37  | 39  | 14  | 19-20   |
| Durban/Louis Botha.....          | 53  | 55  | 53  | 47  | 41  | 38  | 37  | 40  | 45  | 46  | 55  | 54  | 37  | 11-12   |
| East London.....                 | 48  | 52  | 51  | 45  | 40  | 37  | 37  | 38  | 41  | 44  | 49  | 48  | 37  | 23      |
| Estcourt.....                    | 43  | 45  | 44  | 33  | 29  | 23  | 20  | 23  | 28  | 34  | 38  | 40  | 20  | 41      |
| George.....                      | 48  | 47  | 47  | 41  | 39  | 38  | 34  | 36  | 38  | 39  | 43  | 40  | 34  | 10      |
| Goodhouse.....                   | 47  | 57  | 50  | 45  | 33  | 30  | 31  | 31  | 38  | 40  | 48  | 49  | 30  | 21      |
| Johannesburg/Jan Smuts.....      | 46  | 44  | 42  | 33  | 31  | 23  | 28  | 26  | 29  | 32  | 40  | 45  | 23  | 12      |
| Kimberley.....                   | 42  | 44  | 37  | 30  | 23  | 20  | 20  | 20  | 26  | 31  | 36  | 43  | 20  | 31      |
| Kuruman.....                     | 45  | 45  | 40  | 33  | 27  | 18  | 20  | 20  | 24  | 32  | 40  | 44  | 18  | 15-16   |
| Louis Trichardt.....             | 50  | 50  | 47  | 39  | 33  | 29  | 29  | 30  | 37  | 41  | 45  | 41  | 29  | 30      |
| Lydenburg.....                   | 45  | 44  | 40  | 34  | 31  | 21  | 24  | 27  | 34  | 37  | 42  | 46  | 21  | 5-6     |
| Macoville.....                   | 53  | 55  | 51  | 35  | 33  | 28  | 26  | 35  | 40  | 45  | 52  | 54  | 36  | 20-21   |
| Mafeking.....                    | 45  | 44  | 41  | 30  | 22  | 15  | 15  | 22  | 25  | 34  | 40  | 45  | 15  | 33-35   |
| Marnitz.....                     | 52  | 54  | 47  | 41  | 29  | 25  | 26  | 29  | 35  | 45  | 50  | 55  | 25  | 18-19   |
| Matronsberg.....                 | 36  | 37  | 35  | 28  | 25  | 25  | 24  | 25  | 25  | 25  | 32  | 35  | 24  | 29-30   |
| Middelburg.....                  | 31  | 34  | 33  | 25  | 17  | 14  | 13  | 13  | 15  | 22  | 29  | 33  | 13  | 41      |
| Newcastle.....                   | 41  | 43  | 40  | 30  | 21  | 17  | 14  | 20  | 23  | 32  | 31  | 39  | 14  | 30      |
| Okiep.....                       | 43  | 43  | 39  | 35  | 31  | 30  | 27  | 28  | 31  | 32  | 36  | 34  | 27  | 41-43   |
| Phalaborwa.....                  | 55  | 54  | 53  | 49  | 43  | 35  | 36  | 43  | 44  | 49  | 55  | 51  | 35  | 9-10    |
| Pietersburg.....                 | 52  | 51  | 47  | 41  | 35  | 28  | 30  | 31  | 35  | 42  | 45  | 50  | 26  | 11-12   |
| Piet Retief.....                 | 44  | 45  | 38  | 30  | 29  | 22  | 24  | 25  | 29  | 34  | 37  | 43  | 22  | 31-32   |
| Port Elizabeth.....              | 45  | 45  | 45  | 41  | 31  | 31  | 31  | 32  | 35  | 37  | 42  | 44  | 31  | 25      |
| Port Saint Johns.....            | 54  | 52  | 52  | 52  | 48  | 42  | 44  | 43  | 44  | 45  | 45  | 53  | 42  | 42      |
| Pretoria.....                    | 49  | 49  | 43  | 33  | 26  | 24  | 24  | 25  | 30  | 37  | 41  | 43  | 24  | 13      |
| Queenstown.....                  | 39  | 40  | 35  | 31  | 26  | 19  | 21  | 23  | 25  | 29  | 36  | 37  | 19  | 35-37   |
| Sheeprun.....                    | 49  | 39  | 37  | 31  | 27  | 19  | 20  | 22  | 30  | 32  | 36  | 41  | 19  | 5-6     |
| Somerset East.....               | 35  | 41  | 42  | 37  | 31  | 30  | 29  | 29  | 32  | 34  | 38  | 40  | 29  | 10      |
| Standerton.....                  | 38  | 38  | 33  | 22  | 13  | 9   | 9   | 11  | 15  | 25  | 30  | 38  | 9   | 37      |
| Uppington.....                   | 47  | 49  | 44  | 35  | 27  | 18  | 22  | 20  | 28  | 35  | 45  | 50  | 15  | 12      |
| Vanwykavlei.....                 | 41  | 41  | 35  | 31  | 21  | 20  | 12  | 20  | 23  | 27  | 31  | 33  | 12  | 25      |
| Walvis Bay.....                  | 45  | 45  | 45  | 43  | 35  | 35  | 25  | 34  | 32  | 32  | 41  | 45  | 25  | 35      |
| Wepener.....                     | 38  | 36  | 34  | 25  | 19  | 13  | 9   | 13  | 15  | 25  | 31  | 35  | 9   | 39-40   |
| Willowmore.....                  | 39  | 37  | 38  | 31  | 26  | 22  | 20  | 22  | 24  | 29  | 37  | 41  | 20  | 40-41   |
| <b>South-West Africa:</b>        |     |     |     |     |     |     |     |     |     |     |     |     |     |         |
| Gobabis.....                     | 48  | 45  | 41  | 31  | 21  | 15  | 15  | 17  | 22  | 34  | 38  | 47  | 15  | 38      |
| Keetmanshoop.....                | 45  | 51  | 45  | 34  | 26  | 27  | 29  | 27  | 31  | 34  | 43  | 47  | 27  | 9-10    |
| Mariental.....                   | 51  | 55  | 53  | 40  | 35  | 29  | 23  | 30  | 34  | 42  | 49  | 53  | 23  | 8       |
| Ondangua.....                    | 54  | 53  | 45  | 47  | 32  | 30  | 30  | 31  | 39  | 47  | 52  | 54  | 30  | 7       |
| Outjo.....                       | 50  | 51  | 49  | 33  | 32  | 24  | 29  | 29  | 31  | 40  | 45  | 45  | 24  | 7-8     |
| Taureb.....                      | 59  | 59  | 55  | 51  | 42  | 39  | 38  | 42  | 49  | 55  | 58  | 59  | 38  | 35      |
| Windhoek.....                    | 45  | 44  | 39  | 35  | 29  | 25  | 27  | 25  | 31  | 35  | 33  | 38  | 25  | 39-40   |
| <b>Nyasaland:</b>                |     |     |     |     |     |     |     |     |     |     |     |     |     |         |
| Mbabane.....                     | 49  | 47  | 45  | 35  | 31  | 25  | 28  | 23  | 25  | 38  | 40  | 45  | 23  | 20      |
| Blag.....                        | 51  | 52  | 52  | 45  | 41  | 38  | 39  | 42  | 41  | 41  | 45  | 43  | 35  | 14      |

FIGURE 29. MEAN NUMBER OF DAYS WITH MAXIMUM TEMPERATURE 90° F. OR HIGHER

| COUNTRY AND STATION         | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANN | DATA BASE INFO |       |
|-----------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|-------|
|                             |     |     |     |     |     |     |     |     |     |     |     |     |     | FOR            | CTR   |
| Botswana:                   |     |     |     |     |     |     |     |     |     |     |     |     |     |                |       |
| Francistown.....            | 12  | 9   | 10  | 4   | *   | 0   | 0   | 1   | 9   | 20  | 14  | 11  | 89  | 6              | 6     |
| Gaborone.....               | 18  | 15  | 18  | 4   | *   | 0   | 0   | 1   | 8   | 17  | 14  | 14  | 106 | 7              | 7     |
| Ghanzi.....                 | 20  | 17  | 18  | 7   | *   | *   | 0   | 1   | 16  | 23  | 20  | 21  | 139 | 8              | 6     |
| Maun.....                   | 14  | 12  | 15  | 12  | 2   | *   | *   | 4   | 21  | 28  | 21  | 17  | 146 | 9              | 9     |
| Shakawe.....                | 14  | 11  | 11  | 7   | 0   | 0   | 0   | 4   | 21  | 28  | 18  | 18  | 130 | 8              | 8     |
| Teabong.....                | 27  | 23  | 18  | 8   | 0   | 0   | 0   | *   | 11  | 18  | 21  | 26  | 161 | 6-7            | 6-7   |
| Teane.....                  | 28  | 20  | 18  | 8   | 0   | 0   | 0   | *   | 12  | 19  | 20  | 28  | 140 | 6              | 6     |
| Republic of South Africa:   |     |     |     |     |     |     |     |     |     |     |     |     |     |                |       |
| Alexander Bay.....          | *   | *   | 1   | 2   | 2   | *   | *   | 1   | 1   | 1   | *   | 1   | 11  | 12             | 12    |
| Beaufort West.....          | 17  | 13  | 8   | 1   | *   | 0   | 0   | *   | 2   | 4   | 7   | 13  | 66  | 11-12          | 11-12 |
| Bethlehem.....              | 1   | *   | 0   | 0   | 0   | 0   | 0   | 0   | *   | *   | *   | 1   | 3   | 10-11          | 10-11 |
| Calvinia.....               | 15  | 12  | 8   | 1   | 0   | 0   | 0   | 0   | 1   | 2   | 7   | 13  | 60  | 11-12          | 11-12 |
| Cape Agulhas.....           | 0   | *   | *   | *   | *   | 0   | 0   | 0   | *   | 0   | 0   | 0   | *   | 11-12          | 11-12 |
| Cape Columbine.....         | *   | 0   | *   | *   | 0   | 0   | 0   | 0   | 0   | *   | 0   | *   | 1   | 12             | 12    |
| Cape Saint Lucia.....       | 1   | *   | *   | *   | 0   | 0   | 0   | *   | *   | *   | *   | *   | 2   | 11             | 11    |
| Cape Town/D.F. Malan.....   | 2   | 1   | 1   | 1   | *   | 0   | 0   | 0   | *   | *   | 1   | 1   | 8   | 11-12          | 11-12 |
| De Aar.....                 | 16  | 13  | 8   | *   | 0   | 0   | 0   | 0   | 1   | 4   | 8   | 15  | 68  | 10-11          | 10-11 |
| Durban/Louis Botha.....     | 1   | 1   | 1   | *   | 0   | 0   | 0   | *   | *   | *   | *   | 1   | 4   | 11-12          | 11-12 |
| East London.....            | 1   | 1   | 1   | 1   | 1   | 0   | *   | 1   | 1   | *   | *   | 1   | 8   | 12             | 12    |
| Eatecourt.....              | 2   | 2   | 2   | *   | 0   | 0   | 0   | 0   | 1   | 4   | 3   | 3   | 18  | 11             | 11    |
| Johannesburg/Jan Smuts..... | *   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | *   | 0   | 0   | *   | 12             | 12    |
| Kimberley.....              | 18  | 14  | 8   | *   | 0   | 0   | 0   | 0   | 3   | 8   | 10  | 18  | 78  | 12             | 12    |
| Kuruman.....                | 14  | 10  | 4   | 0   | 0   | 0   | 0   | 0   | *   | 8   | 8   | 14  | 56  | 10-11          | 10-11 |
| Lydenburg.....              | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 1   | 0   | 0   | 1   | 8-9            | 8-9   |
| Macquarie.....              | 22  | 14  | 11  | 7   | 1   | 1   | *   | 1   | 8   | 18  | 18  | 21  | 117 | 2-3            | 2-3   |
| Mafeking.....               | 10  | 7   | 8   | 1   | 0   | 0   | 0   | 0   | 2   | 10  | 8   | 11  | 53  | 9-10           | 9-10  |
| Marnitz.....                | 13  | 10  | 7   | 4   | 1   | 0   | 0   | 1   | 6   | 14  | 13  | 12  | 81  | 11-12          | 11-12 |
| Matroosberg.....            | 5   | 4   | 2   | *   | 0   | 0   | 0   | 0   | 0   | *   | 1   | 4   | 16  | 10-11          | 10-11 |
| Middelburg.....             | 10  | 7   | 4   | *   | 0   | 0   | 0   | 0   | *   | 2   | 4   | 9   | 37  | 11             | 11    |
| Okiep.....                  | 12  | 10  | 7   | 1   | *   | 0   | 0   | 0   | *   | 2   | 6   | 10  | 47  | 12-13          | 12-13 |
| Phalaborwa.....             | 16  | 13  | 12  | 7   | 3   | 1   | 1   | 3   | 8   | 13  | 13  | 14  | 104 | 9-10           | 9-10  |
| Pietersburg.....            | 1   | 2   | 1   | 0   | 0   | 0   | 0   | 0   | 1   | 4   | 3   | 2   | 14  | 11-12          | 11-12 |
| Piet Retief.....            | 1   | 1   | 1   | *   | 0   | 0   | 0   | *   | 1   | 3   | 2   | 2   | 11  | 11-12          | 11-12 |
| Port Elizabeth.....         | 1   | *   | 1   | 1   | 1   | 0   | *   | *   | *   | *   | *   | *   | 4   | 12             | 12    |
| Port Saint John.....        | 0   | *   | *   | *   | *   | *   | *   | *   | *   | *   | *   | *   | 1   | 11-12          | 10-12 |
| Queenstown.....             | 10  | 8   | 6   | *   | 0   | 0   | 0   | 0   | *   | 4   | 8   | 10  | 43  | 8-9            | 8-9   |
| Sheeprun.....               | 3   | 3   | 3   | 0   | 0   | 0   | 0   | 0   | *   | 2   | 2   | 8   | 20  | 8-9            | 8-9   |
| Uppington.....              | 26  | 21  | 19  | 3   | *   | 0   | 0   | *   | 8   | 11  | 19  | 28  | 129 | 12             | 12    |
| Wepener.....                | 9   | 8   | 2   | 0   | 0   | 0   | 0   | 0   | 0   | 2   | 2   | 7   | 28  | 12-13          | 12-13 |
| Willowmore.....             | 10  | 9   | 8   | *   | 0   | 0   | 0   | 0   | 1   | 2   | 4   | 8   | 39  | 8-9            | 8-9   |
| South-West Africa:          |     |     |     |     |     |     |     |     |     |     |     |     |     |                |       |
| Gobabis.....                | 18  | 9   | 6   | 1   | 0   | 0   | 0   | *   | 4   | 17  | 12  | 20  | 86  | 8              | 8     |
| Keetmanshoop.....           | 27  | 22  | 19  | 3   | *   | 0   | 0   | 1   | 7   | 12  | 20  | 26  | 137 | 9-10           | 9-10  |
| Mariental.....              | 27  | 23  | 19  | 5   | *   | 0   | 0   | 1   | 11  | 18  | 22  | 29  | 164 | 8              | 8     |
| Outjo.....                  | 18  | 12  | 10  | 3   | 0   | 0   | 0   | 1   | 13  | 23  | 15  | 22  | 117 | 7-8            | 7-8   |
| Windhoek.....               | 10  | 3   | *   | 0   | 0   | 0   | 0   | 0   | *   | 4   | 8   | 12  | 36  | 9-10           | 9-10  |

\* = 0.5 day.

FIGURE 30. MEAN NUMBER OF DAYS WITH MINIMUM TEMPERATURE 32°F. OR LOWER

| COUNTRY AND STATION         |     |     |     |     |     |     |     |     |     |     |     |     | DATA BASE INFO |       |       |
|-----------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|-------|-------|
|                             | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANN            | FOR   | CYR   |
| Botswana:                   |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |
| Francistown.....            | 0   | 0   | 0   | *   | *   | 2   | *   | *   | *   | 0   | 0   | 0   | 2              | 6     | 6     |
| Gaborone.....               | 0   | 0   | 0   | *   | *   | 3   | 2   | *   | *   | *   | 0   | 0   | 6              | 7     | 7     |
| Ghanzi.....                 | 0   | 0   | 0   | *   | 1   | 4   | 3   | 2   | *   | 0   | 0   | 0   | 11             | 6     | 6     |
| Maun.....                   | 0   | 0   | 0   | 0   | *   | 2   | 1   | *   | *   | 0   | 0   | 0   | 3              | 9     | 9     |
| Shakawe.....                | 0   | 0   | 0   | 0   | 0   | 2   | 1   | *   | 0   | 0   | 0   | 0   | 3              | 3     | 3     |
| Tsabong.....                | 0   | 0   | 0   | *   | 2   | 12  | 13  | 8   | 1   | *   | 0   | 0   | 36             | 6-7   | 6-7   |
| Tsane.....                  | 0   | 0   | 0   | *   | 2   | 9   | 10  | 3   | 1   | 0   | 0   | 0   | 23             | 6     | 6     |
| Republic of South Africa:   |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |
| Alexander Bay.....          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0              | 12    | 12    |
| Beaufort West.....          | 0   | 0   | 0   | 0   | 1   | 6   | 6   | 3   | 1   | 0   | 0   | 0   | 18             | 11-12 | 11-12 |
| Bethlehem.....              | 0   | 0   | 0   | 2   | 13  | 23  | 26  | 19  | 4   | 1   | 0   | 0   | 88             | 10-11 | 10-11 |
| Calvinia.....               | 0   | 0   | 0   | 1   | 4   | 6   | 6   | 6   | 3   | 1   | 0   | 0   | 26             | 11-12 | 11-12 |
| Cape Agulhas.....           | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0              | 12    | 12    |
| Cape Columbine.....         | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0              | 11-12 | 11-12 |
| Cape Saint Lucia.....       | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0              | 11    | 10-11 |
| Cape Town/D.F. Malan.....   | 0   | 0   | 0   | 0   | 0   | *   | *   | *   | *   | 0   | 0   | 0   | 1              | 11-12 | 11-12 |
| De Aar.....                 | 0   | 0   | 0   | *   | 4   | 14  | 18  | 9   | 2   | *   | 0   | 0   | 48             | 10-11 | 10-11 |
| Durban/Louis Botha.....     | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0              | 11-12 | 11-12 |
| Eas' London.....            | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0              | 12    | 12    |
| Katcourt.....               | 0   | 0   | 0   | 0   | *   | 4   | 3   | 1   | *   | 0   | 0   | 0   | 9              | 11    | 11    |
| Johannesburg/Jan Smuts..... | 0   | 0   | 0   | 0   | *   | 3   | 2   | 2   | *   | *   | 0   | 0   | 8              | 12    | 12    |
| Kimberley.....              | 0   | 0   | 0   | *   | 1   | 6   | 7   | 8   | 1   | *   | 0   | 0   | 20             | 12    | 12    |
| Kuruman.....                | 0   | 0   | 0   | 0   | 3   | 13  | 18  | 8   | 1   | *   | 0   | 0   | 41             | 10-11 | 10-11 |
| Lydenburg.....              | 0   | 0   | 0   | 0   | 1   | 0   | 6   | 2   | 0   | 0   | 0   | 0   | 18             | 8-6   | 8-6   |
| Macoville.....              | 0   | 0   | 0   | 0   | 0   | *   | *   | 0   | 0   | 0   | 0   | 0   | *              | 2-3   | 2-3   |
| Mafeking.....               | 0   | 0   | 0   | *   | 1   | 4   | 4   | 2   | *   | 0   | 0   | 0   | 11             | 8-10  | 8-10  |
| Marnitz.....                | 0   | 0   | 0   | 0   | *   | 1   | 1   | *   | 0   | 0   | 0   | 0   | 3              | 11-12 | 11-12 |
| Matroosberg.....            | 0   | 0   | 0   | *   | 2   | 5   | 5   | 7   | 3   | 1   | *   | 0   | 23             | 10-11 | 10-11 |
| Middelburg.....             | *   | 0   | 0   | 2   | 8   | 15  | 18  | 12  | 6   | 3   | *   | 0   | 64             | 11    | 11    |
| Oklap.....                  | 0   | 0   | 0   | 0   | *   | *   | 1   | 1   | *   | *   | 0   | 0   | 1              | 12-13 | 11-13 |
| Phalaborwa.....             | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0              | 9-10  | 9-10  |
| Pietersburg.....            | 0   | 0   | 0   | 0   | 0   | 1   | 1   | *   | 0   | 0   | 0   | 0   | 2              | 11-12 | 11-12 |
| Piet Retief.....            | 0   | 0   | 0   | *   | *   | 2   | 2   | 1   | *   | 0   | 0   | 0   | 8              | 11-12 | 11-12 |
| Port Elizabeth.....         | 0   | 0   | 0   | 0   | *   | *   | *   | *   | 0   | 0   | 0   | 0   | *              | 12    | 12    |
| Port Saint John.....        | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0              | 12    | 12    |
| Queenstown.....             | 0   | 0   | 0   | *   | 3   | 8   | 7   | 8   | 1   | *   | 0   | 0   | 24             | 9-11  | 9-11  |
| Rheeprun.....               | 0   | 0   | 0   | *   | 4   | 13  | 17  | 7   | 1   | *   | 0   | 0   | 44             | 8-6   | 8-6   |
| Uppington.....              | 0   | 0   | 0   | 0   | 1   | 6   | 8   | 5   | *   | 0   | 0   | 0   | 19             | 12    | 12    |
| Wepener.....                | 0   | 0   | 0   | 2   | 11  | 19  | 22  | 17  | 6   | 2   | *   | 0   | 79             | 12-13 | 12-13 |
| Willowmore.....             | 0   | 0   | 0   | *   | 3   | 8   | 10  | 8   | *   | *   | 0   | 0   | 27             | 8-9   | 8-9   |
| South-West Africa:          |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |
| Gobabis.....                | 0   | 0   | 0   | *   | 1   | 5   | 8   | 3   | *   | 0   | 0   | 0   | 17             | 8     | 8     |
| Keetmanshoop.....           | 0   | 0   | 0   | 0   | 0   | 1   | 1   | *   | *   | 0   | 0   | 0   | 2              | 9-10  | 9-10  |
| Mariental.....              | 0   | 0   | 0   | 0   | 0   | 2   | 2   | 1   | 0   | 0   | 0   | 0   | 4              | 8     | 8     |
| Outjo.....                  | 0   | 0   | 0   | 0   | *   | 1   | *   | *   | *   | 0   | 0   | 0   | 2              | 7-8   | 7-8   |
| Windhoek.....               | 0   | 0   | 0   | 0   | *   | 1   | 1   | *   | *   | 0   | 0   | 0   | 1              | 9-10  | 9-10  |

\* < 0.5 day.



FIGURE 31. MEAN RELATIVE HUMIDITY (%) AT SPECIFIED HOURS

| COUNTRY AND STATION         | HOUR<br>(LST) |     |     |     |     |     |     |     |     |     |     |     |     |     |       | DATA BASE INFO |  |
|-----------------------------|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|----------------|--|
|                             |               | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANN | FOR   | CTR            |  |
| Botswana:                   |               |     |     |     |     |     |     |     |     |     |     |     |     |     |       |                |  |
| Francistown.....            | 0800          | 68  | 72  | 69  | 69  | 64  | 64  | 65  | 56  | 49  | 48  | 61  | 68  | 63  | 6     | 6              |  |
| Gaborone.....               | 0800          | 64  | 67  | 67  | 70  | 71  | 68  | 65  | 54  | 46  | 48  | 58  | 65  | 62  | 7     | 7              |  |
| Ghanzi.....                 | 0700          | 65  | 68  | 70  | 67  | 62  | 62  | 59  | 50  | 36  | 36  | 54  | 61  | 58  | 6     | 6              |  |
| Maun.....                   | 0800          | 74  | 79  | 76  | 69  | 63  | 64  | 58  | 50  | 40  | 40  | 60  | 71  | 62  | 9     | 9              |  |
| Shakawe.....                | 0700          | 78  | 80  | 77  | 71  | 68  | 69  | 68  | 57  | 45  | 44  | 67  | 74  | 67  | 5     | 5              |  |
| Tsabong.....                | 0700          | 48  | 55  | 62  | 67  | 71  | 73  | 66  | 55  | 39  | 34  | 47  | 49  | 56  | 6-7   | 6-7            |  |
| Tsane.....                  | 0700          | 57  | 59  | 64  | 65  | 66  | 69  | 65  | 57  | 41  | 42  | 63  | 55  | 58  | 6     | 6              |  |
| Republic of South Africa:   |               |     |     |     |     |     |     |     |     |     |     |     |     |     |       |                |  |
| Alexander Bay.....          | 0700          | 84  | 88  | 90  | 87  | 86  | 80  | 81  | 84  | 85  | 81  | 79  | 81  | 84  | 12    | 12             |  |
| Beaufort West.....          | 0800          | 60  | 65  | 71  | 70  | 64  | 65  | 63  | 60  | 60  | 60  | 61  | 57  | 63  | 11-12 | 11-12          |  |
| Bethlehem.....              | 0800          | 78  | 81  | 85  | 88  | 88  | 87  | 86  | 79  | 75  | 71  | 78  | 74  | 80  | 10-11 | 10-11          |  |
| Calvinia.....               | 0700          | 87  | 89  | 88  | 74  | 74  | 76  | 73  | 72  | 69  | 63  | 56  | 63  | 66  | 10-12 | 10-11          |  |
| Cape Agulhas.....           | 0700          | 80  | 82  | 86  | 86  | 85  | 84  | 86  | 85  | 84  | 82  | 80  | 79  | 83  | 11-12 | 11-12          |  |
| Cape Columbine.....         | 0700          | 88  | 90  | 91  | 87  | 87  | 85  | 86  | 83  | 86  | 84  | 84  | 85  | 86  | 12    | 12             |  |
| Cape Saint Lucia.....       | 0800          | 84  | 85  | 88  | 87  | 84  | 81  | 83  | 84  | 85  | 85  | 85  | 83  | 85  | 9-10  | 9-10           |  |
| Cape Town/D.F. Malan.....   | 0700          | 73  | 79  | 85  | 90  | 91  | 90  | 91  | 90  | 88  | 80  | 71  | 70  | 8*  | 11-12 | 11-12          |  |
| De Aar.....                 | 0800          | 56  | 60  | 66  | 73  | 73  | 77  | 73  | 65  | 53  | 51  | 53  | 49  | 62  | 10-11 | 10-11          |  |
| Durban/Louis Botha.....     | 0800          | 78  | 77  | 79  | 79  | 79  | 79  | 80  | 77  | 75  | 74  | 75  | 75  | 77  | 11-12 | 11-12          |  |
| East London.....            | 0800          | 78  | 79  | 83  | 79  | 76  | 68  | 70  | 72  | 76  | 75  | 75  | 74  | 75  | 12    | 12             |  |
| Estcourt.....               | 0800          | 78  | 81  | 82  | 83  | 78  | 74  | 73  | 70  | 71  | 73  | 76  | 75  | 76  | 11    | 11             |  |
| Johannesburg/Jan Smuts..... | 0800          | 77  | 79  | 79  | 78  | 70  | 70  | 68  | 61  | 61  | 63  | 72  | 74  | 71  | 12    | 12             |  |
| Kimberley.....              | 0800          | 57  | 61  | 65  | 72  | 69  | 73  | 67  | 57  | 47  | 47  | 53  | 52  | 60  | 12    | 12             |  |
| Kuruman.....                | 0800          | 65  | 72  | 76  | 82  | 84  | 83  | 78  | 69  | 56  | 53  | 58  | 60  | 70  | 9-11  | 9-11           |  |
| Lydenburg.....              | 0800          | 80  | 81  | 80  | 82  | 79  | 78  | 75  | 73  | 66  | 69  | 74  | 76  | 76  | 5-6   | 5-6            |  |
| Macville.....               | 0800          | 70  | 79  | 72  | 73  | 74  | 75  | 75  | 72  | 64  | 66  | 63  | 63  | 71  | 2-3   | 2-3            |  |
| Mafeking.....               | 0800          | 63  | 68  | 65  | 68  | 66  | 66  | 63  | 54  | 46  | 46  | 57  | 60  | 60  | 9-10  | 9-10           |  |
| Marnitz.....                | 0800          | 69  | 71  | 70  | 71  | 68  | 68  | 67  | 60  | 56  | 55  | 59  | 65  | 65  | 11-12 | 11-12          |  |
| Matroosberg.....            | 0700          | 65  | 70  | 75  | 80  | 77  | 78  | 77  | 76  | 74  | 69  | 63  | 60  | 72  | 10-11 | 10-11          |  |
| Middelburg.....             | 0800          | 66  | 70  | 74  | 75  | 72  | 75  | 72  | 65  | 61  | 61  | 63  | 60  | 68  | 10-11 | 10-11          |  |
| Okiep.....                  | 0700          | 53  | 56  | 61  | 67  | 67  | 69  | 66  | 66  | 62  | 58  | 50  | 50  | 60  | 12-13 | 12-13          |  |
| Phalaborwa.....             | 0800          | 75  | 79  | 79  | 80  | 77  | 76  | 75  | 72  | 68  | 66  | 71  | 73  | 74  | 9-10  | 9-10           |  |
| Pieterburg.....             | 0800          | 76  | 78  | 79  | 81  | 77  | 77  | 75  | 70  | 66  | 65  | 70  | 74  | 74  | 12    | 12             |  |
| Piet Retief.....            | 0800          | 82  | 84  | 84  | 82  | 72  | 68  | 69  | 68  | 69  | 73  | 79  | 80  | 76  | 11-12 | 11-12          |  |
| Port Elizabeth.....         | 0800          | 78  | 79  | 85  | 84  | 85  | 82  | 84  | 84  | 82  | 79  | 77  | 75  | 81  | 12    | 12             |  |
| Port Saint Johns.....       | 0800          | 82  | 82  | 82  | 76  | 67  | 61  | 60  | 66  | 75  | 77  | 80  | 80  | 74  | 12    | 12             |  |
| Queenstown.....             | 0800          | 75  | 79  | 82  | 82  | 70  | 73  | 71  | 69  | 71  | 71  | 71  | 69  | 74  | 9-11  | 9-11           |  |
| Sheeprun.....               | 0800          | 82  | 83  | 85  | 89  | 88  | 85  | 82  | 81  | 75  | 75  | 79  | 75  | 82  | 5-6   | 5-6            |  |
| Uptington.....              | 0700          | 44  | 48  | 56  | 65  | 69  | 72  | 65  | 58  | 48  | 46  | 43  | 41  | 55  | 12    | 12             |  |
| Wepener.....                | 0800          | 62  | 70  | 72  | 81  | 82  | 84  | 81  | 68  | 54  | 54  | 61  | 60  | 69  | 12-13 | 12-13          |  |
| Willowmore.....             | 0800          | 70  | 74  | 80  | 85  | 84  | 84  | 82  | 80  | 75  | 71  | 69  | 63  | 76  | 8-9   | 8-9            |  |
| South-West Africa:          |               |     |     |     |     |     |     |     |     |     |     |     |     |     |       |                |  |
| Gobabis.....                | 0700          | 57  | 65  | 70  | 71  | 65  | 67  | 60  | 49  | 38  | 36  | 47  | 47  | 56  | 8     | 8              |  |
| Keetmanshoop.....           | 0700          | 44  | 47  | 51  | 56  | 50  | 55  | 50  | 45  | 39  | 39  | 37  | 36  | 46  | 9-10  | 9-10           |  |
| Mariental.....              | 0700          | 45  | 50  | 58  | 61  | 58  | 63  | 56  | 48  | 39  | 37  | 40  | 37  | 49  | 8     | 8              |  |
| Outjo.....                  | 0700          | 62  | 69  | 75  | 72  | 60  | 59  | 54  | 50  | 45  | 44  | 52  | 53  | 58  | 8     | 8              |  |
| Windhoek.....               | 0700          | 50  | 54  | 60  | 55  | 47  | 48  | 49  | 34  | 28  | 28  | 39  | 40  | 44  | 9-10  | 9-10           |  |
| Botswana:                   |               |     |     |     |     |     |     |     |     |     |     |     |     |     |       |                |  |
| Francistown.....            | 1400          | 43  | 42  | 39  | 38  | 27  | 29  | 29  | 24  | 22  | 25  | 39  | 40  | 34  | 6     | 6              |  |
| Gaborone.....               | 1400          | 40  | 38  | 38  | 36  | 31  | 29  | 27  | 24  | 22  | 25  | 35  | 39  | 32  | 6-7   | 6-7            |  |
| Ghanzi.....                 | 1300          | 37  | 38  | 40  | 33  | 27  | 28  | 27  | 21  | 16  | 19  | 31  | 36  | 29  | 6     | 6              |  |
| Maun.....                   | 1400          | 47  | 48  | 43  | 34  | 26  | 25  | 23  | 19  | 17  | 20  | 35  | 45  | 32  | 9     | 9              |  |
| Shakawe.....                | 1300          | 49  | 50  | 46  | 39  | 29  | 26  | 24  | 20  | 14  | 19  | 38  | 44  | 33  | 5     | 5              |  |
| Tsabong.....                | 1300          | 23  | 28  | 31  | 30  | 28  | 28  | 23  | 19  | 14  | 14  | 23  | 26  | 24  | 6-7   | 6-7            |  |
| Tsane.....                  | 1300          | 31  | 32  | 33  | 31  | 28  | 30  | 27  | 24  | 20  | 21  | 29  | 30  | 28  | 6     | 6              |  |
| Republic of South Africa:   |               |     |     |     |     |     |     |     |     |     |     |     |     |     |       |                |  |
| Alexander Bay.....          | 1300          | 59  | 58  | 58  | 53  | 52  | 49  | 49  | 52  | 53  | 54  | 54  | 57  | 54  | 12    | 12             |  |
| Beaufort West.....          | 1400          | 26  | 29  | 35  | 37  | 38  | 37  | 34  | 31  | 29  | 27  | 27  | 25  | 31  | 11-12 | 11-12          |  |
| Bethlehem.....              | 1400          | 49  | 48  | 46  | 47  | 38  | 37  | 34  | 30  | 34  | 38  | 46  | 46  | 41  | 10-11 | 10-11          |  |
| Calvinia.....               | 1300          | 26  | 27  | 31  | 36  | 40  | 46  | 41  | 38  | 32  | 29  | 27  | 25  | 33  | 10-11 | 10-11          |  |
| Cape Agulhas.....           | 1300          | 70  | 70  | 74  | 75  | 76  | 74  | 76  | 75  | 74  | 73  | 72  | 70  | 73  | 11-12 | 11-12          |  |
| Cape Columbine.....         | 1300          | 72  | 74  | 75  | 75  | 77  | 76  | 77  | 74  | 74  | 72  | 73  | 73  | 74  | 12    | 12             |  |
| Cape Saint Lucia.....       | 1400          | 76  | 76  | 76  | 75  | 73  | 70  | 70  | 73  | 78  | 79  | 79  | 76  | 78  | 9-10  | 9-10           |  |
| Cape Town/D.F. Malan.....   | 1300          | 52  | 53  | 52  | 55  | 62  | 63  | 63  | 61  | 58  | 55  | 53  | 53  | 57  | 11-12 | 11-12          |  |
| De Aar.....                 | 1400          | 25  | 27  | 32  | 39  | 36  | 39  | 36  | 30  | 23  | 24  | 25  | 22  | 30  | 10-11 | 10-11          |  |
| Durban/Louis Botha.....     | 1400          | 71  | 70  | 69  | 66  | 61  | 54  | 56  | 59  | 66  | 69  | 72  | 70  | 65  | 11-12 | 11-12          |  |

FIGURE 31. MEAN RELATIVE HUMIDITY (Continued)

| COUNTRY AND STATION                   | HOUR<br>(LST) |     |     |     |     |     |     |     |     |     |     |     |     | DATA BASE INFO |       |       |
|---------------------------------------|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|-------|-------|
|                                       |               | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANN            | PGR   | CYR   |
| Republic of South Africa (Continued): |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |
| East London.....                      | 1400          | 71  | 71  | 73  | 67  | 60  | 53  | 55  | 59  | 67  | 71  | 71  | 70  | 66             | 12    | 12    |
| Katcourt.....                         | 1400          | 55  | 55  | 52  | 50  | 41  | 37  | 36  | 32  | 37  | 42  | 52  | 51  | 45             | 11    | 11    |
| Johannesburg/Jan Brute.....           | 1400          | 50  | 52  | 48  | 48  | 38  | 36  | 34  | 28  | 32  | 37  | 49  | 51  | 42             | 12    | 12    |
| Kimberley.....                        | 1400          | 32  | 33  | 36  | 39  | 35  | 37  | 33  | 27  | 23  | 24  | 29  | 28  | 31             | 12    | 12    |
| Kuruman.....                          | 1400          | 33  | 39  | 30  | 39  | 35  | 36  | 32  | 28  | 24  | 25  | 30  | 32  | 33             | 9-11  | 9-11  |
| Lydenburg.....                        | 1400          | 54  | 52  | 45  | 48  | 35  | 35  | 32  | 30  | 30  | 40  | 55  | 59  | 43             | 5-6   | 5-6   |
| Macuvile.....                         | 1400          | 45  | 56  | 40  | 45  | 42  | 42  | 50  | 48  | 43  | 45  | 43  | 39  | 46             | 2-3   | 2-3   |
| Mafeking.....                         | 1400          | 40  | 43  | 39  | 40  | 34  | 31  | 28  | 25  | 23  | 25  | 35  | 38  | 33             | 9-10  | 9-10  |
| Marnitz.....                          | 1400          | 45  | 46  | 42  | 42  | 34  | 34  | 33  | 31  | 30  | 32  | 38  | 43  | 38             | 11-12 | 11-12 |
| Matroosberg.....                      | 1300          | 29  | 29  | 35  | 41  | 44  | 45  | 45  | 43  | 39  | 35  | 30  | 27  | 37             | 10-11 | 10-11 |
| Middelburg.....                       | 1400          | 32  | 33  | 39  | 41  | 35  | 40  | 33  | 32  | 29  | 29  | 31  | 27  | 34             | 10-11 | 10-11 |
| Okiep.....                            | 1300          | 32  | 30  | 33  | 37  | 41  | 45  | 41  | 40  | 34  | 34  | 32  | 31  | 36             | 12-13 | 12-13 |
| Phalaborwa.....                       | 1400          | 49  | 51  | 45  | 46  | 35  | 37  | 36  | 36  | 36  | 40  | 45  | 45  | 42             | 9-10  | 9-10  |
| Pietersburg.....                      | 1400          | 50  | 51  | 47  | 45  | 36  | 36  | 35  | 32  | 33  | 37  | 45  | 51  | 42             | 12    | 12    |
| Piet Retief.....                      | 1400          | 55  | 57  | 51  | 50  | 37  | 35  | 35  | 32  | 40  | 51  | 60  | 58  | 47             | 11-12 | 11-12 |
| Port Elizabeth.....                   | 1400          | 65  | 65  | 65  | 65  | 61  | 57  | 55  | 50  | 55  | 65  | 65  | 64  | 64             | 12    | 12    |
| Port Saint Johns.....                 | 1400          | 50  | 50  | 51  | 76  | 71  | 64  | 67  | 71  | 75  | 75  | 81  | 80  | 76             | 12    | 12    |
| Queenstown.....                       | 1400          | 42  | 41  | 43  | 43  | 37  | 35  | 32  | 29  | 32  | 34  | 39  | 37  | 37             | 9-11  | 9-11  |
| Sheeprun.....                         | 1400          | 61  | 57  | 55  | 52  | 43  | 42  | 38  | 35  | 39  | 51  | 55  | 54  | 49             | 5-6   | 5-6   |
| Uptington.....                        | 1300          | 21  | 22  | 25  | 25  | 25  | 21  | 27  | 23  | 19  | 20  | 20  | 19  | 24             | 12    | 12    |
| Walvis Bay.....                       | 1300          | 51  | 50  | 54  | 55  | 79  | 73  | 75  | 53  | 52  | 51  | 53  | 52  | 51             | 7-8   | 5-6   |
| Wepener.....                          | 1400          | 34  | 35  | 39  | 40  | 35  | 35  | 32  | 25  | 22  | 25  | 33  | 32  | 32             | 12-13 | 12-13 |
| Willowmore.....                       | 1400          | 35  | 37  | 43  | 49  | 45  | 47  | 44  | 41  | 35  | 37  | 35  | 32  | 41             | 5-9   | 5-9   |
| South-West Africa:                    |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |
| Gobabis.....                          | 1300          | 30  | 32  | 33  | 32  | 24  | 24  | 22  | 15  | 15  | 15  | 25  | 23  | 24             | 5     | 5     |
| Keetmanshoop.....                     | 1300          | 15  | 20  | 23  | 25  | 22  | 25  | 22  | 15  | 15  | 15  | 15  | 14  | 19             | 9-10  | 9-10  |
| Mariental.....                        | 1300          | 25  | 27  | 29  | 29  | 25  | 30  | 25  | 22  | 15  | 15  | 20  | 20  | 24             | 5     | 5     |
| Outjo.....                            | 1300          | 31  | 37  | 37  | 32  | 22  | 21  | 21  | 17  | 15  | 15  | 25  | 27  | 25             | 5     | 5     |
| Windhoek.....                         | 1300          | 25  | 32  | 34  | 31  | 22  | 21  | 19  | 14  | 12  | 13  | 22  | 22  | 23             | 9-10  | 9-10  |

FIGURE 32. MEAN PRECIPITATION (INCHES)

| COUNTRY AND STATION              | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANN  | YRS REC |
|----------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|---------|
| <b>Botswana:</b>                 |     |     |     |     |     |     |     |     |     |     |     |     |      |         |
| Francistown.....                 | 4.0 | 3.2 | 2.7 | 0.7 | 0.2 | 0.1 | *   | *   | 0.1 | 0.9 | 2.2 | 3.5 | 17.7 | 36      |
| Gaborone.....                    | 3.5 | 3.5 | 3.4 | 1.4 | 0.5 | 0.2 | 0.2 | 0.2 | 0.5 | 1.5 | 2.5 | 3.5 | 21.3 | 40      |
| Ghanzi.....                      | 3.9 | 3.7 | 3.1 | 1.5 | 0.3 | 0.1 | *   | *   | 0.1 | 0.5 | 1.5 | 2.5 | 17.9 | 34      |
| Kasane.....                      | 5.7 | 5.4 | 4.0 | 1.1 | 0.2 | *   | 0.0 | *   | 0.1 | 0.7 | 2.9 | 5.7 | 27.8 | 38      |
| Maun.....                        | 4.1 | 3.7 | 3.2 | 1.0 | 0.2 | *   | 0.0 | 0.0 | *   | 0.7 | 1.7 | 3.2 | 17.5 | 37      |
| Morewa.....                      | 3.7 | 3.4 | 3.1 | 0.9 | 0.4 | 0.1 | 0.1 | 0.1 | 0.2 | 1.0 | 2.2 | 3.5 | 15.4 | 35      |
| Palapye.....                     | 4.5 | 4.5 | 2.5 | 1.5 | 0.2 | 0.0 | *   | *   | *   | 0.2 | 3.4 | 3.3 | 20.7 | 5       |
| Tlokweng.....                    | 1.5 | 2.0 | 1.5 | 1.3 | 0.5 | 0.4 | 0.1 | *   | 0.3 | 0.5 | 1.0 | 1.5 | 11.1 | 24      |
| Tlokweng.....                    | 2.2 | 1.7 | 2.3 | 0.9 | 0.3 | 0.2 | 0.2 | *   | *   | 0.5 | 1.5 | 1.1 | 11.2 | 5       |
| <b>Lesotho:</b>                  |     |     |     |     |     |     |     |     |     |     |     |     |      |         |
| Maseru.....                      | 3.9 | 3.7 | 3.7 | 2.2 | 1.0 | 0.5 | 0.5 | 0.0 | 0.5 | 2.2 | 3.1 | 3.2 | 25.4 | 55      |
| Mokhotlong.....                  | 3.5 | 3.3 | 2.5 | 1.4 | 0.9 | 0.2 | 0.4 | 0.5 | 0.9 | 2.3 | 3.1 | 3.4 | 22.5 | 30      |
| Quthus Nek.....                  | 0.4 | 5.2 | 4.9 | 2.0 | 1.1 | 0.5 | 0.4 | 0.5 | 1.7 | 2.7 | 4.1 | 5.5 | 35.5 | 52      |
| <b>Republic of South Africa:</b> |     |     |     |     |     |     |     |     |     |     |     |     |      |         |
| Alexander Bay.....               | *   | *   | 0.2 | 0.1 | 0.2 | 0.4 | 0.1 | 0.3 | 0.1 | 0.1 | *   | 0.1 | 1.7  | 12      |
| Beaufort West.....               | 0.5 | 1.3 | 1.5 | 0.5 | 0.5 | 0.3 | 0.3 | 0.4 | 0.5 | 0.5 | 0.5 | 0.9 | 5.9  | 53      |
| Bethlehem.....                   | 5.5 | 3.5 | 2.5 | 2.5 | 1.2 | 0.5 | 0.3 | 0.4 | 1.5 | 2.7 | 3.7 | 3.3 | 25.2 | 10-11   |
| Bloemfontein.....                | 3.3 | 3.2 | 3.0 | 2.1 | 0.9 | 0.3 | 0.4 | 0.7 | 0.5 | 2.0 | 2.5 | 2.7 | 22.1 | 24      |
| Calvinia.....                    | 0.3 | 0.5 | 0.7 | 0.5 | 1.1 | 1.1 | 1.0 | 0.9 | 0.5 | 0.4 | 0.5 | 0.3 | 5.3  | 73      |
| Cape Agulhas.....                | 0.5 | 0.7 | 1.2 | 1.5 | 2.1 | 2.4 | 2.2 | 2.1 | 1.0 | 1.5 | 1.1 | 0.7 | 17.9 | 79      |
| Cape Columbine.....              | 0.1 | 0.3 | 0.3 | 1.0 | 1.5 | 1.7 | 1.5 | 1.3 | 0.5 | 0.5 | 0.3 | 0.3 | 9.5  | 24      |
| Cape Saint Lucia.....            | 4.9 | 5.7 | 7.2 | 4.7 | 3.9 | 3.7 | 2.9 | 2.4 | 2.7 | 3.7 | 4.4 | 4.7 | 50.5 | 42      |
| Cape Town/D.F. Malan.....        | 0.4 | 0.5 | 0.5 | 1.7 | 2.7 | 3.9 | 2.5 | 3.1 | 1.4 | 1.5 | 0.5 | 0.4 | 19.5 | 11-12   |
| De Aar.....                      | 1.2 | 2.1 | 2.2 | 1.3 | 0.7 | 0.4 | 0.2 | 0.2 | 0.5 | 0.7 | 1.0 | 0.5 | 11.3 | 51      |
| Durban/Louis Botha.....          | 5.7 | 4.7 | 4.7 | 4.5 | 2.1 | 1.4 | 1.5 | 1.5 | 2.4 | 3.7 | 4.4 | 4.7 | 41.3 | 11-12   |
| East London.....                 | 3.0 | 3.1 | 3.9 | 2.7 | 1.9 | 1.4 | 1.1 | 1.5 | 3.5 | 4.4 | 3.7 | 3.4 | 34.0 | 21      |
| Katcourt.....                    | 4.1 | 4.5 | 4.2 | 2.1 | 0.5 | 0.2 | 0.4 | 0.7 | 1.3 | 2.7 | 3.9 | 5.1 | 30.2 | 20      |

Footnote at end of table.

FIGURE 32. MEAN PRECIPITATION (Continued)

| COUNTRY AND STATION                   | JAN | FEB | MAR | APR  | MAY  | JUN  | JUL  | AUG  | SEP  | OCT | NOV | DEC | ANN   | YRS REC |
|---------------------------------------|-----|-----|-----|------|------|------|------|------|------|-----|-----|-----|-------|---------|
| Republic of South Africa (Continued): |     |     |     |      |      |      |      |      |      |     |     |     |       |         |
| George.....                           | 3.2 | 2.3 | 3.1 | 2.5  | 2.4  | 1.5  | 1.8  | 2.3  | 2.8  | 3.4 | 2.9 | 2.4 | 30.5  | 20      |
| Goodhouse.....                        | 0.1 | 0.3 | 0.6 | 0.2  | 0.1  | 0.2  | 0.2  | 0.1  | 0.1  | 0.1 | 0.1 | 0.2 | 2.3   | 20      |
| Johannesburg/Jan Smuts.....           | 4.1 | 3.8 | 2.8 | 2.4  | 0.7  | 0.5  | 0.4  | 0.2  | 1.3  | 2.9 | 4.4 | 4.6 | 28.1  | 12      |
| Jonkershoek.....                      | 3.0 | 3.7 | 5.1 | 14.6 | 18.6 | 19.4 | 21.1 | 23.0 | 13.5 | 7.6 | 6.2 | 3.6 | 139.3 | 15      |
| Kimberley.....                        | 2.2 | 2.4 | 2.9 | 1.8  | 0.8  | 0.4  | 0.2  | 0.5  | 0.4  | 1.3 | 1.8 | 2.2 | 16.8  | 28      |
| Kuruman.....                          | 2.8 | 3.4 | 2.9 | 2.0  | 0.8  | 0.5  | 0.2  | 0.3  | 0.3  | 1.0 | 1.2 | 2.3 | 17.6  | 29      |
| Louis Trichardt.....                  | 6.4 | 5.0 | 3.8 | 1.5  | 0.8  | 0.5  | 0.6  | 0.3  | 0.5  | 1.9 | 3.4 | 4.6 | 29.3  | 51      |
| Lydenburg.....                        | 3.9 | 3.3 | 2.3 | 2.2  | 0.7  | 0.3  | 0.2  | 0.3  | 1.0  | 2.4 | 4.8 | 4.8 | 26.2  | 14-15   |
| Macuville.....                        | 3.6 | 2.4 | 1.7 | 0.7  | 0.2  | 0.2  | 0.1  | *    | 0.2  | 0.8 | 1.9 | 2.4 | 14.2  | 31      |
| Mafeking.....                         | 4.0 | 3.3 | 3.4 | 1.6  | 0.6  | 0.2  | 0.2  | 0.2  | 0.7  | 1.6 | 2.5 | 3.9 | 22.3  | 59      |
| Marnitz.....                          | 3.5 | 3.5 | 2.0 | 1.0  | 0.3  | 0.2  | *    | *    | 0.2  | 1.1 | 2.0 | 3.0 | 16.9  | 14      |
| Matroosberg.....                      | 0.3 | 0.5 | 0.5 | 0.8  | 1.1  | 1.6  | 1.2  | 1.4  | 0.7  | 0.6 | 0.5 | 0.4 | 9.6   | 54      |
| Middelburg.....                       | 1.7 | 2.3 | 2.6 | 1.2  | 0.7  | 0.3  | 0.4  | 0.3  | 0.7  | 0.9 | 1.5 | 1.5 | 14.2  | 44      |
| Newcastle.....                        | 6.3 | 5.6 | 5.0 | 1.8  | 1.0  | 0.4  | 0.7  | 0.5  | 1.4  | 3.1 | 5.1 | 5.3 | 36.2  | 40      |
| Okiep.....                            | 0.2 | 0.3 | 0.4 | 0.5  | 1.0  | 1.0  | 0.8  | 0.9  | 0.6  | 0.3 | 0.2 | 0.2 | 6.4   | 72      |
| Phalaborwa.....                       | 4.7 | 3.4 | 1.4 | 1.8  | 0.3  | 0.5  | 0.4  | 0.2  | 0.5  | 1.0 | 2.5 | 3.5 | 20.2  | 9-10    |
| Pietersburg.....                      | 3.3 | 2.3 | 1.3 | 1.0  | 0.3  | 0.4  | 0.1  | 0.1  | 0.6  | 1.2 | 2.8 | 4.2 | 17.4  | 11-12   |
| Piet Retief.....                      | 5.7 | 4.8 | 4.0 | 2.2  | 0.9  | 0.4  | 0.5  | 0.7  | 1.8  | 3.7 | 5.1 | 6.3 | 35.9  | 54      |
| Port Elizabeth.....                   | 1.4 | 1.3 | 1.9 | 1.6  | 2.5  | 2.5  | 2.0  | 2.4  | 2.4  | 2.3 | 2.3 | 1.6 | 24.2  | 24      |
| Port Saint John.....                  | 5.0 | 5.2 | 5.8 | 3.3  | 2.6  | 1.4  | 1.7  | 1.9  | 3.5  | 4.9 | 4.7 | 5.1 | 45.2  | 70      |
| Pretoria.....                         | 5.1 | 4.1 | 3.6 | 1.7  | 1.0  | 0.5  | 0.4  | 0.2  | 0.9  | 2.4 | 4.9 | 5.1 | 30.0  | 22      |
| Queenstown.....                       | 3.2 | 3.5 | 3.2 | 1.6  | 0.9  | 0.5  | 0.5  | 0.6  | 1.1  | 1.6 | 2.4 | 2.9 | 22.0  | 87      |
| Sheeprun.....                         | 6.7 | 4.4 | 4.4 | 2.5  | 0.9  | 1.8  | 0.5  | 1.0  | 0.8  | 2.9 | 3.9 | 3.9 | 33.5  | 5-6     |
| Somerset East.....                    | 2.5 | 2.9 | 3.5 | 2.1  | 1.4  | 0.9  | 0.8  | 1.0  | 1.9  | 2.2 | 2.6 | 2.7 | 24.4  | 53      |
| Standerton.....                       | 4.8 | 4.7 | 3.4 | 1.6  | 0.8  | 0.3  | 0.4  | 0.8  | 0.8  | 2.9 | 4.1 | 4.1 | 28.3  | 36      |
| Uplington.....                        | 0.7 | 0.9 | 1.1 | 1.0  | 0.5  | 0.2  | *    | 0.1  | 0.2  | 0.4 | 0.5 | 0.6 | 6.2   | 12      |
| Vanwykavlei.....                      | 0.6 | 1.1 | 1.5 | 0.8  | 0.4  | 0.2  | 0.2  | 0.2  | 0.2  | 0.4 | 0.3 | 0.5 | 6.6   | 75      |
| Walvis Bay.....                       | *   | 0.1 | 0.1 | 0.1  | *    | *    | 0.0  | *    | *    | *   | *   | *   | 0.4   | 46-49   |
| Wepener.....                          | 4.1 | 3.4 | 4.1 | 1.9  | 1.1  | 0.5  | 0.4  | 0.6  | 0.8  | 1.9 | 2.9 | 3.0 | 24.8  | 41      |
| Willmore.....                         | 0.9 | 1.0 | 1.5 | 0.9  | 0.9  | 0.5  | 0.4  | 0.5  | 0.5  | 0.7 | 0.7 | 0.9 | 9.3   | 66      |
| South-West Africa:                    |     |     |     |      |      |      |      |      |      |     |     |     |       |         |
| Gobabis.....                          | 3.2 | 3.2 | 2.7 | 1.2  | 0.3  | 0.1  | *    | *    | 0.2  | 0.6 | 1.2 | 1.6 | 14.3  | 60-62   |
| Keetmanshoop.....                     | 0.7 | 1.6 | 1.9 | 0.5  | 0.1  | 0.1  | *    | *    | *    | 0.2 | 0.5 | 0.7 | 6.4   | 12-13   |
| Mariental.....                        | 1.2 | 2.0 | 1.8 | 0.6  | 0.1  | 0.1  | *    | *    | 0.1  | 0.2 | 0.5 | 0.7 | 7.3   | 28-30   |
| Ondangwa.....                         | 4.0 | 4.8 | 3.4 | 1.3  | 0.1  | *    | *    | *    | 0.1  | 0.5 | 1.7 | 3.4 | 19.5  | 48-54   |
| Outjo.....                            | 3.5 | 3.7 | 3.1 | 1.5  | 0.2  | *    | *    | *    | *    | 0.4 | 1.2 | 2.5 | 16.1  | 58-63   |
| Taameb.....                           | 4.6 | 5.1 | 3.2 | 1.7  | 0.3  | *    | *    | *    | 0.1  | 0.7 | 2.1 | 3.4 | 21.2  | 49-50   |
| Windhoek.....                         | 3.0 | 3.0 | 3.2 | 1.6  | 0.3  | *    | *    | *    | 0.1  | 0.4 | 1.0 | 1.8 | 14.5  | 69-70   |
| Swaziland:                            |     |     |     |      |      |      |      |      |      |     |     |     |       |         |
| Mbabane.....                          | 9.6 | 8.3 | 7.4 | 2.8  | 1.3  | 0.7  | 0.9  | 1.1  | 2.4  | 5.0 | 6.7 | 8.4 | 54.6  | 53      |
| Stegi.....                            | 5.5 | 5.0 | 4.6 | 2.3  | 1.1  | 0.7  | 0.6  | 0.7  | 1.7  | 2.9 | 4.1 | 4.9 | 34.1  | 55      |

\* &lt; 0.05 inch.

FIGURE 33. MEAN NUMBER OF DAYS WITH PRECIPITATION  $\geq 0.004$  INCH

| COUNTRY AND STATION       | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANN | YRS REC |
|---------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------|
| Botswana:                 |     |     |     |     |     |     |     |     |     |     |     |     |     |         |
| Francistown.....          | 8   | 7   | 6   | 2   | 1   | 1   | 1   | 1   | 1   | 3   | 0   | 8   | 45  | 36      |
| Gaberone.....             | 9   | 8   | 8   | 5   | 2   | 1   | 1   | 1   | 2   | 6   | 8   | 10  | 61  | 40      |
| Ghanai.....               | 11  | 10  | 8   | 4   | 2   | 1   | 1   | 1   | 1   | 4   | 7   | 9   | 59  | 34      |
| Kasane.....               | 13  | 11  | 9   | 3   | 1   | 1   | 0   | 1   | 1   | 3   | 8   | 11  | 62  | 38      |
| Maun.....                 | 12  | 11  | 9   | 4   | 1   | 1   | 0   | 0   | 1   | 3   | 7   | 10  | 59  | 37      |
| Serowe.....               | 8   | 7   | 7   | 3   | 1   | 1   | 1   | 1   | 1   | 4   | 6   | 7   | 47  | 35      |
| Shakawe.....              | 13  | 14  | 11  | 5   | 1   | 0   | *   | *   | *   | 3   | 10  | 10  | 67  | 5       |
| Tsabong.....              | 5   | 5   | 6   | 4   | 2   | 1   | 1   | 1   | 1   | 2   | 3   | 5   | 36  | 24      |
| Tsane.....                | 7   | 7   | 7   | 4   | 1   | 1   | 1   | *   | *   | 4   | 7   | 6   | 46  | 6       |
| Lesotho:                  |     |     |     |     |     |     |     |     |     |     |     |     |     |         |
| Maseru.....               | 10  | 10  | 10  | 7   | 5   | 2   | 2   | 2   | 3   | 7   | 8   | 9   | 75  | 58      |
| Mokhotlong.....           | 14  | 14  | 11  | 7   | 4   | 1   | 2   | 2   | 3   | 9   | 12  | 13  | 92  | 30      |
| Qachas Nek.....           | 15  | 14  | 12  | 7   | 4   | 2   | 2   | 3   | 5   | 9   | 11  | 13  | 97  | 62      |
| Republic of South Africa: |     |     |     |     |     |     |     |     |     |     |     |     |     |         |
| Alexander Bay.....        | 1   | *   | 2   | 2   | 3   | 3   | 2   | 3   | 2   | 2   | 1   | 1   | 22  | 12      |
| Beaufort West.....        | 3   | 4   | 5   | 3   | 3   | 2   | 2   | 2   | 3   | 3   | 3   | 3   | 36  | 53      |
| Bethlehem.....            | 12  | 10  | 10  | 7   | 5   | 1   | 2   | 1   | 4   | 9   | 12  | 14  | 87  | 11      |

Footnote at end of table.

FIGURE 33. DAYS WITH PRECIPITATION  $\geq 0.04$  INCH (Continued)

| COUNTRY AND STATION                   | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANN | YRS RNC |
|---------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------|
| Republic of South Africa (Continued): |     |     |     |     |     |     |     |     |     |     |     |     |     |         |
| Bloemfontein.....                     | 11  | 11  | 11  | 8   | 5   | 2   | 2   | 2   | 3   | 7   | 8   | 9   | 79  | 24      |
| Calvinia.....                         | 1   | 2   | 2   | 4   | 5   | 5   | 5   | 5   | 3   | 3   | 2   | 2   | 39  | 73      |
| Cape Agulhas.....                     | 5   | 6   | 8   | 8   | 10  | 10  | 11  | 10  | 9   | 9   | 7   | 6   | 99  | 79      |
| Cape Columbine.....                   | 2   | 2   | 3   | 6   | 9   | 9   | 10  | 9   | 7   | 6   | 3   | 2   | 68  | 24      |
| Cape Saint Lucia.....                 | 10  | 10  | 12  | 9   | 7   | 7   | 6   | 6   | 9   | 11  | 11  | 12  | 110 | 42      |
| Cape Town/D.F. Malan.....             | 4   | 5   | 5   | 8   | 12  | 11  | 11  | 12  | 9   | 9   | 5   | 4   | 94  | 11-14   |
| De Aar.....                           | 4   | 5   | 6   | 4   | 3   | 2   | 1   | 1   | 2   | 2   | 3   | 3   | 36  | 61      |
| Durban/Louis Botha.....               | 14  | 11  | 13  | 11  | 6   | 4   | 5   | 5   | 9   | 14  | 16  | 15  | 124 | 11-12   |
| East London.....                      | 13  | 11  | 12  | 9   | 7   | 5   | 4   | 6   | 9   | 13  | 11  | 13  | 113 | 21      |
| Estcourt.....                         | 14  | 13  | 12  | 7   | 4   | 1   | 2   | 3   | 6   | 11  | 14  | 16  | 103 | 20      |
| George.....                           | 12  | 12  | 12  | 11  | 10  | 8   | 8   | 10  | 11  | 14  | 12  | 11  | 131 | 20      |
| Goodhouse.....                        | 2   | 3   | 3   | 3   | 2   | 3   | 2   | 2   | 1   | 2   | 2   | 2   | 27  | 20      |
| Johannesburg/Jan Smuts.....           | 14  | 10  | 9   | 9   | 4   | 3   | 1   | 1   | 4   | 9   | 14  | 15  | 92  | 12      |
| Kimberley.....                        | 9   | 9   | 10  | 7   | 5   | 2   | 2   | 2   | 2   | 5   | 7   | 8   | 68  | 28      |
| Kuruman.....                          | 7   | 8   | 7   | 4   | 3   | 1   | 1   | 1   | 1   | 3   | 4   | 6   | 46  | 29      |
| Louis Trichardt.....                  | 12  | 11  | 11  | 6   | 4   | 3   | 3   | 2   | 3   | 6   | 9   | 11  | 81  | 51      |
| Lydenburg.....                        | 13  | 10  | 7   | 7   | 4   | 2   | 1   | 1   | 3   | 8   | 14  | 14  | 84  | 14-15   |
| Macville.....                         | 6   | 6   | 4   | 2   | 1   | 1   | 1   | 1   | 1   | 2   | 5   | 6   | 36  | 31      |
| Mafeking.....                         | 9   | 8   | 8   | 4   | 2   | 1   | 1   | 1   | 2   | 5   | 7   | 8   | 56  | 59      |
| Mamils.....                           | 8   | 7   | 5   | 3   | 2   | 1   | 1   | 1   | 1   | 5   | 6   | 9   | 49  | 14      |
| Matroosberg.....                      | 1   | 2   | 3   | 3   | 5   | 5   | 6   | 5   | 4   | 3   | 3   | 1   | 41  | 54      |
| Middelburg.....                       | 6   | 7   | 8   | 5   | 4   | 2   | 3   | 3   | 3   | 4   | 5   | 5   | 55  | 44      |
| Newcastle.....                        | 13  | 11  | 11  | 6   | 3   | 1   | 2   | 2   | 5   | 11  | 13  | 14  | 92  | 40      |
| Okiep.....                            | 1   | 2   | 3   | 3   | 4   | 5   | 4   | 5   | 4   | 3   | 2   | 2   | 38  | 72      |
| Phalaborwa.....                       | 10  | 9   | 6   | 6   | 2   | 3   | 2   | 1   | 3   | 5   | 9   | 10  | 65  | 9-10    |
| Pietersburg.....                      | 10  | 7   | 5   | 6   | 2   | 2   | 1   | 1   | 2   | 5   | 9   | 12  | 62  | 11-12   |
| Pict Retief.....                      | 13  | 12  | 11  | 7   | 4   | 2   | 3   | 3   | 6   | 12  | 14  | 15  | 102 | 54      |
| Port Elizabeth.....                   | 8   | 8   | 9   | 9   | 9   | 8   | 7   | 9   | 6   | 11  | 10  | 9   | 106 | 24      |
| Port Saint Johns.....                 | 14  | 12  | 12  | 8   | 5   | 3   | 4   | 6   | 9   | 13  | 14  | 14  | 114 | 70      |
| Pretoria.....                         | 14  | 12  | 11  | 7   | 4   | 2   | 2   | 1   | 4   | 9   | 13  | 14  | 93  | 22      |
| Queenstown.....                       | 11  | 11  | 11  | 7   | 5   | 3   | 3   | 4   | 5   | 7   | 9   | 10  | 86  | 87      |
| Sheeprun.....                         | 20  | 15  | 16  | 11  | 5   | 5   | 4   | 4   | 6   | 16  | 16  | 15  | 134 | 5-6     |
| Somerset East.....                    | 8   | 9   | 9   | 6   | 5   | 3   | 3   | 4   | 5   | 7   | 8   | 7   | 74  | 83      |
| Standerton.....                       | 12  | 9   | 8   | 5   | 3   | 1   | 1   | 1   | 3   | 8   | 10  | 10  | 71  | 36      |
| Upington.....                         | 3   | 4   | 6   | 3   | 3   | 2   | 1   | 1   | 1   | 2   | 3   | 3   | 32  | 12      |
| Vanwykavlei.....                      | 2   | 3   | 4   | 3   | 2   | 2   | 2   | 2   | 1   | 2   | 2   | 2   | 27  | 75      |
| Walvis Bay.....                       | *   | 1   | 1   | 1   | *   | *   | 0   | *   | *   | *   | *   | *   | 4   | 46-49   |
| Wepener.....                          | 12  | 11  | 11  | 11  | 7   | 5   | 2   | 3   | 3   | 4   | 7   | 8   | 93  | 41      |
| Willmore.....                         | 3   | 3   | 5   | 4   | 4   | 3   | 3   | 3   | 2   | 3   | 3   | 3   | 39  | 66      |
| South-West Africa:                    |     |     |     |     |     |     |     |     |     |     |     |     |     |         |
| Gobabis.....                          | 9   | 8   | 8   | 4   | 1   | *   | *   | *   | 1   | 3   | 5   | 6   | 47  | 60-62   |
| Keetmanshoop.....                     | 4   | 7   | 6   | 3   | 2   | 1   | *   | *   | *   | 2   | 2   | 3   | 30  | 12-13   |
| Mariental.....                        | 4   | 5   | 6   | 2   | 1   | *   | *   | *   | *   | 1   | 2   | 3   | 24  | 29-30   |
| Ondangwa.....                         | 9   | 10  | 9   | 4   | 1   | *   | *   | *   | *   | 2   | 5   | 8   | 49  | 48-54   |
| Outjo.....                            | 8   | 9   | 8   | 4   | 1   | *   | *   | *   | *   | 2   | 5   | 6   | 43  | 59-63   |
| Taameb.....                           | 15  | 14  | 12  | 6   | 2   | *   | *   | *   | 1   | 5   | 9   | 13  | 75  | 49-50   |
| Windhoek.....                         | 10  | 10  | 10  | 5   | 2   | *   | *   | *   | 1   | 3   | 5   | 8   | 55  | 69-76   |
| Swaziland:                            |     |     |     |     |     |     |     |     |     |     |     |     |     |         |
| Mbabane.....                          | 17  | 15  | 15  | 10  | 6   | 3   | 3   | 5   | 9   | 14  | 17  | 18  | 132 | 53      |
| Stegl.....                            | 11  | 10  | 10  | 7   | 4   | 3   | 3   | 3   | 5   | 9   | 10  | 11  | 86  | 58      |

\* &lt; 0.5 day.

FIGURE 34. MAXIMUM 24-HOUR PRECIPITATION (INCHES)

| COUNTRY AND STATION              | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANN | YRS REC |
|----------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------|
| <b>Botswana:</b>                 |     |     |     |     |     |     |     |     |     |     |     |     |     |         |
| Francistown.....                 | 2.8 | 3.2 | 4.6 | 1.8 | 0.7 | 1.3 | 0.1 | 0.4 | 0.4 | 1.4 | 2.4 | 2.7 | 1.6 | 25      |
| Gaborone.....                    | 3.2 | 2.6 | 6.7 | 2.7 | 1.0 | 1.4 | 0.7 | 0.7 | 2.8 | 2.8 | 2.0 | 4.3 | 0.7 | 26      |
| Ghanzi.....                      | 5.1 | 2.0 | 2.4 | 2.0 | 1.3 | 0.2 | 0.3 | 0.1 | 0.4 | 3.3 | 1.7 | 2.4 | 5.1 | 23      |
| Kasane.....                      | 3.0 | 4.6 | 3.9 | 1.8 | 1.0 | 0.3 | 0.0 | *   | 0.8 | 1.5 | 2.4 | 2.8 | 4.6 | 19      |
| Maun.....                        | 3.5 | 4.1 | 4.7 | 2.4 | 1.0 | 0.4 | 0.1 | 0.1 | 0.3 | 1.3 | 2.2 | 2.8 | 4.7 | 28      |
| Shakawe.....                     | 3.0 | 2.2 | 2.2 | 1.2 | 0.5 | 0.0 | 0.1 | 0.1 | *   | 0.3 | 2.2 | 2.3 | 3.0 | 5       |
| Taung.....                       | 1.9 | 1.7 | 2.2 | 1.9 | 1.1 | 1.7 | 0.3 | 0.4 | 1.5 | 1.2 | 1.3 | 3.0 | 3.0 | 23-24   |
| Tloee.....                       | 2.4 | 1.7 | 2.1 | 1.1 | 0.8 | 0.9 | 0.5 | 0.1 | 0.1 | 0.6 | 1.7 | 1.0 | 2.4 | 6       |
| <b>Lesotho:</b>                  |     |     |     |     |     |     |     |     |     |     |     |     |     |         |
| Maseru.....                      | 3.9 | 1.8 | 2.4 | 1.9 | 1.4 | 0.7 | 0.9 | 1.6 | 1.3 | 2.2 | 2.6 | 3.4 | 3.9 | 19      |
| Mokhotlong.....                  | 1.3 | 1.8 | 1.3 | 1.2 | 1.3 | 0.6 | 0.9 | 0.9 | 1.5 | 3.0 | 1.8 | 1.2 | 3.0 | 19      |
| <b>Republic of South Africa:</b> |     |     |     |     |     |     |     |     |     |     |     |     |     |         |
| Alexander Bay.....               | 0.3 | 0.1 | 0.7 | 0.2 | 0.5 | 0.8 | 0.2 | 0.8 | 0.3 | 0.1 | 0.1 | 0.5 | 0.8 | 12      |
| Beaufort West.....               | 1.2 | 1.1 | 2.3 | 2.2 | 3.0 | 0.7 | 1.0 | 0.9 | 1.7 | 1.1 | 0.9 | 0.7 | 3.0 | 11-12   |
| Bethlehem.....                   | 3.0 | 3.0 | 1.7 | 1.9 | 1.7 | 1.4 | 0.5 | 1.0 | 2.1 | 1.7 | 3.8 | 1.8 | 3.8 | 10-11   |
| Bloemfontein.....                | 2.5 | 1.7 | 2.2 | 1.9 | 1.3 | 0.7 | 0.7 | 1.6 | 4.3 | 1.9 | 2.4 | 1.3 | 4.3 | 14      |
| Calvinia.....                    | 0.8 | 1.7 | 3.1 | 2.2 | 1.8 | 1.4 | 2.1 | 1.2 | 1.3 | 0.9 | 2.0 | 1.1 | 3.1 | 30-31   |
| Cape Agulhas.....                | 4.6 | 5.0 | 2.3 | 1.6 | 1.8 | 2.4 | 1.7 | 4.0 | 2.6 | 4.8 | 2.4 | 3.7 | 5.0 | 31      |
| Cape Clumbine.....               | 0.3 | 0.8 | 0.6 | 1.2 | 2.0 | 1.3 | 0.8 | 1.4 | 1.3 | 0.7 | 0.7 | 1.3 | 2.0 | 26      |
| Cape Saint Lucia.....            | 5.4 | 5.4 | 6.3 | 7.3 | 8.5 | 9.0 | 4.8 | 5.1 | 2.4 | 3.9 | 4.5 | 4.9 | 9.0 | 30      |
| Cape Town/D.F. Malan.....        | 0.5 | 1.3 | 0.7 | 1.8 | 1.2 | 1.9 | 1.1 | 1.4 | 1.4 | 1.6 | 1.0 | 0.6 | 1.9 | 11-12   |
| De Aar.....                      | 3.1 | 2.4 | 2.2 | 1.6 | 1.1 | 1.2 | 1.5 | 1.0 | 1.2 | 1.2 | 1.3 | 1.3 | 3.1 | 20-31   |
| Durban/Louis Botha.....          | 4.3 | 3.4 | 3.2 | 5.6 | 3.1 | 4.3 | 4.0 | 2.5 | 2.4 | 3.4 | 2.1 | 6.4 | 6.4 | 11-12   |
| East London.....                 | 2.2 | 4.8 | 4.2 | 4.6 | 3.5 | 4.0 | 4.8 | 1.9 | 3.4 | 4.0 | 6.0 | 5.0 | 6.0 | 31      |
| Estcourt.....                    | 4.1 | 3.2 | 2.0 | 2.3 | 2.0 | 1.1 | 1.5 | 2.0 | 3.3 | 1.9 | 3.0 | 2.6 | 4.1 | 30      |
| George.....                      | 2.4 | 2.1 | 3.3 | 3.1 | 4.4 | 1.1 | 3.3 | 3.1 | 2.6 | 2.3 | 3.5 | 3.6 | 4.4 | 19      |
| Goodhouse.....                   | 0.4 | 1.2 | 1.4 | 0.9 | 0.1 | 0.6 | 0.4 | 0.2 | 0.3 | 0.6 | 0.6 | 0.2 | 1.4 | 11      |
| Johannesburg/Jan Smuts.....      | 1.7 | 1.8 | 3.0 | 1.9 | 1.2 | 1.2 | 1.2 | 1.0 | 1.4 | 2.8 | 2.6 | 3.5 | 3.6 | 12      |
| Kimberley.....                   | 2.4 | 2.2 | 2.6 | 2.0 | 2.2 | 2.7 | 0.9 | 2.4 | 1.2 | 2.3 | 2.5 | 2.5 | 2.7 | 31      |
| Kuruman.....                     | 3.3 | 3.2 | 2.9 | 4.1 | 2.2 | 1.3 | 0.8 | 1.6 | 1.3 | 3.0 | 2.7 | 2.8 | 4.1 | 29-30   |
| Louis Trichardt.....             | 4.1 | 2.5 | 3.0 | 2.0 | 2.8 | 2.6 | 1.1 | 0.5 | 1.2 | 2.8 | 3.4 | 3.7 | 4.1 | 15      |
| Lydenburg.....                   | 2.1 | 1.7 | 1.3 | 1.9 | 0.3 | 0.9 | 0.8 | 0.3 | 1.0 | 1.6 | 1.7 | 2.5 | 2.5 | 5-6     |
| Mafeking.....                    | 3.1 | 3.5 | 4.5 | 2.5 | 1.4 | 2.6 | 0.5 | 0.9 | 2.2 | 3.2 | 2.3 | 4.0 | 4.5 | 23-24   |
| Marnitz.....                     | 4.8 | 2.7 | 3.0 | 1.9 | 0.6 | 0.8 | 0.5 | 0.2 | 1.0 | 1.8 | 2.0 | 2.5 | 4.8 | 15-19   |
| Matroosberg.....                 | 1.0 | 0.8 | 1.0 | 1.7 | 1.1 | 1.2 | 1.4 | 1.8 | 1.3 | 2.0 | 1.6 | 1.7 | 2.0 | 29-30   |
| Middelburg.....                  | 2.1 | 2.8 | 2.4 | 2.1 | 1.6 | 1.1 | 1.4 | 1.3 | 1.7 | 1.5 | 1.5 | 2.2 | 2.8 | 30      |
| Newcastle.....                   | 3.5 | 4.7 | 2.6 | 2.4 | 3.5 | 1.4 | 2.0 | 1.1 | 2.0 | 1.6 | 2.6 | 3.3 | 4.7 | 19      |
| Okiep.....                       | 0.4 | 1.7 | 1.2 | 2.1 | 1.3 | 3.4 | 0.7 | 0.7 | 1.3 | 0.4 | 2.0 | 0.7 | 3.4 | 30-31   |
| Phalaborwa.....                  | 3.0 | 3.2 | 1.4 | 1.7 | 0.8 | 0.8 | 0.7 | 0.8 | 1.1 | 1.3 | 2.1 | 2.4 | 3.9 | 9-10    |
| Pieterburg.....                  | 3.1 | 1.6 | 1.7 | 1.4 | 0.5 | 1.0 | 0.3 | 0.3 | 1.1 | 1.7 | 1.8 | 3.4 | 3.4 | 11-12   |
| Piet Retief.....                 | 3.6 | 3.4 | 3.0 | 2.6 | 1.8 | 2.5 | 2.4 | 1.9 | 2.4 | 3.2 | 4.2 | 3.4 | 4.2 | 28-29   |
| Port Elizabeth.....              | 1.6 | 4.8 | 3.3 | 4.2 | 3.0 | 2.8 | 2.3 | 2.4 | 2.9 | 2.2 | 4.1 | 3.8 | 4.8 | 43      |
| Port Saint John.....             | 2.6 | 6.1 | 5.4 | 4.3 | 3.1 | 3.7 | 2.1 | 4.0 | 5.4 | 2.0 | 7.1 | 3.2 | 7.1 | 19      |
| Pretoria.....                    | 2.4 | 2.8 | 3.6 | 2.0 | 1.8 | 2.8 | 1.3 | 0.4 | 1.3 | 1.4 | 3.9 | 3.7 | 3.9 | 12      |
| Queenstown.....                  | 2.9 | 1.9 | 1.8 | 1.9 | 2.3 | 1.1 | 1.2 | 0.7 | 1.6 | 1.1 | 2.0 | 2.2 | 2.9 | 19      |
| Rheoprun.....                    | 3.8 | 3.7 | 1.5 | 1.4 | 0.9 | 2.7 | 0.5 | 1.5 | 1.0 | 0.9 | 2.0 | 2.0 | 3.8 | 5-6     |
| Romerset East.....               | 2.0 | 2.4 | 2.4 | 5.5 | 3.0 | 0.9 | 2.5 | 1.2 | 2.3 | 5.0 | 1.9 | 2.6 | 5.5 | 19      |
| Uppington.....                   | 1.0 | 1.4 | 1.3 | 1.7 | 1.3 | 0.4 | 0.1 | 0.3 | 0.8 | 0.6 | 1.5 | 0.8 | 1.7 | 12      |
| Vanwykville.....                 | 2.1 | 2.5 | 1.3 | 1.4 | 0.6 | 0.7 | 1.7 | 0.7 | 1.1 | 1.3 | 1.3 | 1.5 | 2.5 | 19      |
| Wepener.....                     | 4.2 | 4.8 | 2.6 | 1.5 | 1.8 | 1.8 | 1.0 | 1.3 | 1.9 | 3.7 | 2.4 | 2.7 | 4.8 | 31-33   |
| Willowmore.....                  | 2.4 | 1.0 | 1.8 | 0.7 | 1.7 | 0.6 | 0.8 | 0.5 | 0.7 | 0.7 | 1.5 | 1.7 | 2.4 | 5-9     |
| <b>South-West Africa:</b>        |     |     |     |     |     |     |     |     |     |     |     |     |     |         |
| Gobabis.....                     | 3.0 | 3.2 | 3.3 | 2.1 | 0.9 | 0.8 | 0.3 | 0.8 | 1.2 | 1.3 | 1.8 | 2.1 | 3.3 | 40      |
| Keetmanshoop.....                | 1.1 | 2.4 | 1.6 | 1.1 | 1.0 | 0.1 | *   | 0.1 | 0.5 | 0.3 | 0.7 | 3.9 | 3.9 | 9-10    |
| Mariental.....                   | 1.0 | 1.4 | 1.6 | 0.9 | 0.4 | 0.3 | 0.2 | 0.3 | 0.3 | 0.4 | 0.9 | 1.4 | 1.0 | 8       |
| Ondangwa.....                    | 5.0 | 3.2 | 3.2 | 3.7 | 0.9 | na  | 0.4 | 0.1 | 0.3 | 1.3 | 2.2 | 3.3 | 5.0 | 38      |
| Outjo.....                       | 1.8 | 2.8 | 1.0 | 1.7 | 0.3 | *   | *   | 0.6 | 0.4 | 1.0 | 2.0 | 2.2 | 2.8 | 7-8     |
| Tsumeb.....                      | 2.3 | 4.8 | 3.1 | 4.8 | 0.9 | 0.3 | 0.1 | *   | 0.0 | 1.1 | 2.7 | 3.2 | 4.8 | 40      |
| Windhoek.....                    | 3.4 | 3.3 | 3.3 | 3.0 | 2.3 | 0.5 | 0.4 | 0.4 | 1.7 | 1.0 | 2.4 | 1.7 | 3.4 | 47-48   |
| <b>Swaziland:</b>                |     |     |     |     |     |     |     |     |     |     |     |     |     |         |
| Mbabane.....                     | 3.7 | 7.2 | 4.6 | 3.0 | 2.4 | 3.8 | 2.6 | 2.0 | 2.7 | 3.1 | 2.4 | 3.4 | 7.2 | 19      |
| Stegi.....                       | 4.5 | 6.2 | 3.3 | 2.6 | 3.3 | 5.9 | 2.6 | 2.3 | 1.7 | 2.1 | 2.8 | 3.5 | 6.2 | 19      |

na Data not available.

\* &lt; 0.05 inch.

FIGURE 38. GREATEST AND LEAST PRECIPITATION (INCHES)

| COUNTRY AND STATION       | GREATEST |  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  | OCT  | NOV  | DEC  | ANN  | YRS REC |       |
|---------------------------|----------|--|------|------|------|------|------|------|------|------|------|------|------|------|------|---------|-------|
|                           | LEAST    |  |      |      |      |      |      |      |      |      |      |      |      |      |      |         |       |
| Botswana:                 |          |  |      |      |      |      |      |      |      |      |      |      |      |      |      |         |       |
| Francistown.....          | G        |  | 13.8 | 10.7 | 9.7  | 3.0  | 1.5  | 1.4  | 0.2  | 0.4  | 2.7  | 2.6  | 6.5  | 8.5  | 32.5 |         | 35    |
|                           | L        |  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.4  | 9.7  |         | 31-34 |
| Gaborone.....             | G        |  | 8.6  | 11.5 | 12.2 | 6.9  | 2.8  | 1.7  | 0.7  | 1.3  | 4.4  | 5.6  | 5.2  | 8.7  | 34.8 |         | 37    |
|                           | L        |  | 0.4  | 0.2  | 0.1  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.1  | 0.1  | *    | 13.1 |         | 33-37 |
| Ghansi.....               | G        |  | 15.3 | 8.4  | 10.8 | 7.3  | 1.8  | 0.4  | 0.5  | 0.1  | 0.4  | 4.3  | 4.5  | 5.9  | 30.2 |         | 30    |
|                           | L        |  | 0.8  | 0.2  | 0.1  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.2  | 10.6 |         | 25-30 |
| Kasane.....               | G        |  | 19.3 | 18.9 | 17.4 | 8.0  | 2.2  | 0.3  | 0.0  | *    | 1.6  | 2.4  | 5.8  | 11.2 | 39.8 |         | 28    |
|                           | L        |  | 2.0  | 0.6  | 0.2  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.5  | 0.7  | 14.8 |         | 28    |
| Maun.....                 | G        |  | 15.0 | 13.3 | 10.8 | 3.7  | 1.3  | 0.4  | 0.2  | 0.2  | 0.5  | 2.4  | 4.6  | 9.2  | 30.6 |         | 34    |
|                           | L        |  | 0.7  | 0.3  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | *    | 0.6  | 11.2 |         | 30-34 |
| Shakawe.....              | G        |  | 9.5  | 8.9  | 6.1  | 3.5  | 0.7  | 0.0  | 0.1  | 0.1  | *    | 0.5  | 5.9  | 4.4  | 22.6 |         | 5     |
|                           | L        |  | 2.2  | na   | 1.0  | 0.2  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | *    | 0.7  | 1.1  | na   |         | 2-5   |
| Tsabong.....              | G        |  | 4.5  | 3.5  | 7.6  | 4.8  | 1.5  | 2.6  | 0.7  | 0.7  | 2.1  | 1.5  | 5.2  | 5.5  | 20.0 |         | 23-24 |
|                           | L        |  | *    | 0.3  | 0.1  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 7.0  |         | 21-24 |
| Tsano.....                | G        |  | 6.5  | 2.8  | 4.6  | 2.0  | 1.0  | 1.0  | 1.0  | 0.1  | 0.1  | 1.2  | 5.4  | 1.5  | 18.1 |         | 6     |
|                           | L        |  | 1.1  | 1.3  | 0.8  | 0.1  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | *    | 0.2  | 0.1  | na   |         | 3-6   |
| Lesotho:                  |          |  |      |      |      |      |      |      |      |      |      |      |      |      |      |         |       |
| Maseru.....               | G        |  | 13.0 | 9.2  | 8.6  | 0.3  | 3.2  | 4.3  | 3.4  | 3.5  | 3.9  | 5.4  | 8.7  | 7.0  | 44.1 |         | 45    |
|                           | L        |  | 0.7  | 0.7  | 0.6  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.2  | 0.1  | 0.7  | 16.9 |         | 48    |
| Mokhotlong.....           | G        |  | 5.7  | 6.0  | 5.6  | 3.0  | 3.2  | 1.1  | 1.9  | 2.8  | 2.4  | 5.0  | 7.0  | 5.0  | 27.8 |         | 21    |
|                           | L        |  | 2.2  | 0.9  | 0.9  | 0.2  | 0.0  | 0.0  | 9.0  | 0.0  | 0.0  | 0.7  | *    | 1.3  | 16.0 |         | 21    |
| Republic of South Africa: |          |  |      |      |      |      |      |      |      |      |      |      |      |      |      |         |       |
| Alexander Bay.....        | G        |  | 0.3  | 1.0  | 1.5  | 0.6  | 1.8  | 1.1  | 1.0  | 1.3  | 0.4  | 0.3  | 0.8  | 0.7  | 3.7  |         | 10-17 |
|                           | L        |  | 0.0  | 0.0  | 0.0  | 0.0  | *    | *    | 0.0  | 0.0  | 0.0  | *    | 0.0  | 0.0  | 0.8  |         | 12-16 |
| Beaufort West.....        | G        |  | 3.4  | 1.9  | 5.0  | 3.9  | 3.8  | 1.0  | 1.2  | 1.1  | 2.0  | 2.1  | 2.8  | 1.6  | 15.0 |         | 11-12 |
|                           | L        |  | 0.1  | *    | 0.1  | 0.2  | 0.1  | 0.0  | 0.0  | 0.1  | 0.0  | *    | *    | *    | 4.8  |         | 10-12 |
| Bethlehem.....            | G        |  | 10.2 | 6.3  | 4.5  | 5.4  | 3.4  | 2.7  | 1.0  | 1.5  | 9.6  | 9.9  | 6.0  | 5.9  | 34.8 |         | 10-11 |
|                           | L        |  | 1.0  | 0.9  | 0.7  | 2.1  | 0.0  | *    | 0.0  | 0.0  | 0.1  | 0.3  | 1.7  | 0.9  | 18.4 |         | 7-11  |
| Bloemfontein.....         | G        |  | 6.5  | 6.2  | 8.1  | 7.2  | 3.0  | 1.3  | 2.0  | 3.5  | 4.4  | 4.6  | 5.6  | 6.8  | 39.3 |         | 24    |
|                           | L        |  | 0.8  | 0.8  | 0.2  | 0.1  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.2  | *    | 0.2  | 14.9 |         | 24    |
| Calvinia.....             | G        |  | 2.5  | 4.4  | 4.3  | 4.7  | 4.6  | 4.7  | 4.2  | 4.4  | 2.9  | 1.8  | 3.4  | 1.5  | 18.4 |         | 74-75 |
|                           | L        |  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 4.3  |         | 71-75 |
| Cape Agulhas.....         | G        |  | 5.2  | 7.0  | 5.0  | 6.1  | 5.4  | 7.3  | 5.0  | 5.0  | 9.4  | 7.3  | 4.5  | 4.5  | 28.6 |         | 81    |
|                           | L        |  | 0.0  | 0.0  | 0.0  | 0.2  | 0.3  | 0.3  | 0.6  | 0.1  | 0.2  | 0.2  | 0.0  | 0.0  | 5.0  |         | 77-81 |
| Cape Columbine.....       | G        |  | 0.5  | 2.0  | 0.9  | 1.8  | 5.1  | 5.2  | 3.7  | 3.2  | 2.8  | 1.6  | 1.3  | 1.7  | 16.8 |         | 26    |
|                           | L        |  | 0.0  | 0.0  | 0.0  | 0.0  | 0.2  | 0.4  | 0.5  | 0.3  | 0.2  | 0.1  | 0.0  | 0.0  | 5.2  |         | 23-26 |
| Cape Saint Lucia.....     | G        |  | 13.1 | 22.4 | 33.0 | 14.3 | 5.6  | 20.1 | 10.4 | 12.1 | 8.1  | 10.0 | 16.6 | 16.0 | 95.1 |         | 43    |
|                           | L        |  | 1.4  | 1.0  | 1.2  | 0.5  | 0.0  | 0.2  | 0.1  | 0.4  | 0.1  | 0.0  | 0.3  | 0.8  | 28.7 |         | 39-43 |
| Cape Town/D.F. Malan.     | G        |  | 1.0  | 2.0  | 1.6  | 4.5  | 6.8  | 8.8  | 4.8  | 4.4  | 3.3  | 4.2  | 1.5  | 1.1  | 25.2 |         | 11-12 |
|                           | L        |  | 0.1  | *    | 0.1  | 0.2  | 0.7  | 0.6  | 0.4  | 0.8  | 0.7  | 0.3  | 0.0  | 0.0  | 15.4 |         | 6-12  |
| De Aar.....               | G        |  | 7.6  | 4.2  | 4.8  | 4.1  | 3.2  | 1.8  | 2.5  | 1.7  | 2.2  | 3.1  | 3.8  | 2.4  | 19.9 |         | 20-21 |
|                           | L        |  | *    | 0.2  | 0.4  | 0.2  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 5.6  |         | 17-21 |
| Durban/Louis Botha...     | G        |  | 10.7 | 10.7 | 9.6  | 11.9 | 6.0  | 5.7  | 5.8  | 3.6  | 4.7  | 9.9  | 8.1  | 10.7 | 51.4 |         | 11-12 |
|                           | L        |  | 1.8  | 2.0  | 0.8  | 0.7  | 0.1  | 0.0  | 0.1  | 0.1  | 0.9  | 1.4  | 1.7  | 2.4  | 32.0 |         | 6-12  |
| East London.....          | G        |  | 8.0  | 7.9  | 14.5 | 9.7  | 11.3 | 8.0  | 9.2  | 9.2  | 11.5 | 15.3 | 15.4 | 11.1 | 53.1 |         | 85    |
|                           | L        |  | 0.6  | 0.3  | 0.7  | 0.2  | *    | 0.0  | 0.0  | 0.1  | 0.3  | 0.5  | *    | 0.5  | 14.0 |         | 80-85 |
| Estcourt.....             | G        |  | 11.3 | 9.8  | 13.5 | 7.1  | 3.8  | 2.0  | 2.8  | 4.9  | 5.0  | 7.4  | 8.5  | 10.0 | 46.7 |         | 73    |
|                           | L        |  | 1.0  | 0.0  | 0.1  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.9  | 1.0  | 17.3 |         | 72-73 |
| George.....               | G        |  | 7.3  | 9.9  | 8.3  | 9.8  | 12.3 | 11.7 | 6.3  | 10.5 | 15.9 | 9.1  | 10.7 | 18.1 | 55.4 |         | 83    |
|                           | L        |  | 0.6  | 0.6  | 0.5  | 0.5  | 0.2  | 0.1  | 0.1  | 0.3  | 0.7  | 0.4  | 0.2  | 0.7  | 22.5 |         | 83    |
| Goodhouse.....            | G        |  | 0.5  | 1.4  | 2.7  | 0.9  | 1.1  | 1.3  | 1.1  | 0.3  | 0.3  | 0.9  | 1.1  | 1.5  | 5.1  |         | 21    |
|                           | L        |  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |         | 21    |
| Johannesburg/Jan Smuts.   | G        |  | 10.6 | 5.9  | 6.0  | 3.7  | 3.4  | 2.3  | 2.6  | 1.0  | 4.6  | 7.8  | 9.1  | 6.4  | 37.8 |         | 14-15 |
|                           | L        |  | 1.6  | 1.8  | 0.6  | 0.0  | 0.0  | *    | 0.0  | 0.0  | 0.0  | 0.9  | 2.6  | 2.7  | 17.6 |         | 9-13  |
| Kimberley.....            | G        |  | 8.4  | 7.4  | 8.7  | 6.3  | 2.9  | 4.1  | 2.3  | 4.6  | 5.7  | 4.4  | 5.6  | 8.4  | 30.0 |         | 74    |
|                           | L        |  | 0.4  | 0.2  | 0.1  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | *    | 0.0  | 0.1  | 7.0  |         | 71-74 |
| Kuruman.....              | G        |  | 8.4  | 9.4  | 6.5  | 10.0 | 2.6  | 2.5  | 2.0  | 3.3  | 2.7  | 5.0  | 5.1  | 6.5  | 34.8 |         | 27-30 |
|                           | L        |  | 0.1  | 0.0  | 0.2  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 6.8  |         | 27-30 |
| Louis Trichardt.....      | G        |  | 17.5 | 12.9 | 19.1 | 4.8  | 3.8  | 3.5  | 4.1  | 1.8  | 2.6  | 6.2  | 8.7  | 19.3 | 46.8 |         | 41    |
|                           | L        |  | 0.0  | 0.2  | 0.2  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.2  | 0.6  | 12.1 |         | 41    |
| Lydenburg.....            | G        |  | 6.1  | 5.2  | 2.7  | 5.3  | 0.5  | 1.9  | 0.8  | 0.5  | 1.8  | 4.5  | 5.1  | 7.5  | 30.1 |         | 5-6   |
|                           | L        |  | 3.2  | 1.0  | 0.3  | 0.8  | *    | 0.0  | 0.0  | 0.0  | 0.0  | 1.1  | 3.5  | 3.3  | 20.9 |         | 4-6   |
| Mafeking.....             | G        |  | 12.9 | 7.5  | 11.0 | 7.4  | 2.6  | 4.1  | 2.5  | 5.4  | 3.3  | 5.6  | 7.4  | 9.3  | 34.2 |         | 47-48 |
|                           | L        |  | 0.6  | 0.2  | 0.4  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | *    | 0.5  | 0.1  | 10.4 |         | 41-47 |

Footnotes at end of table.

FIGURE 38. GREATEST AND LEAST PRECIPITATION (Continued)

| COUNTRY AND STATION                      | GREATEST<br>LEAST | MONTHS |      |      |      |      |      |      |     |      |      |      |      | ANN  | YRS REC |
|--|-------------------|--------|------|------|------|------|------|------|-----|------|------|------|------|------|---------|
|  |                   | JAN    | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG | SEP  | OCT  | NOV  | DEC  |      |         |
| Republic of South Africa<br>(Continued): |                   |        |      |      |      |      |      |      |     |      |      |      |      |      |         |
| Maritzburg.....                          | G                 | 9.2    | 7.5  | 5.5  | 2.6  | 0.6  | 0.6  | 0.6  | 0.2 | 1.4  | 3.1  | 4.3  | 6.1  | 24.3 | 15-19   |
|  | L                 | 0.2    | 0.1  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0 | 0.0  | 0.0  | 0.4  | 0.1  | 7.7  | 12-15   |
| Matroosberg.....                         | G                 | 1.7    | 1.5  | 2.2  | 1.9  | 3.3  | 3.7  | 2.6  | 3.1 | 2.5  | 2.4  | 2.5  | 2.5  | 13.7 | 30-31   |
|  | L                 | 0.0    | 0.0  | 0.0  | 0.0  | 0.1  | 0.1  | *    | *   | 0.0  | *    | 0.0  | 0.0  | 5.0  | 27-31   |
| Middelburg.....                          | G                 | 7.0    | 7.2  | 8.4  | 4.2  | 2.7  | 2.3  | 3.0  | 2.6 | 4.0  | 3.3  | 5.9  | 4.3  | 24.5 | 45      |
|  | L                 | 0.0    | 0.1  | 0.2  | 0.1  | 0.0  | 0.0  | 0.0  | 0.0 | 0.0  | 0.0  | *    | 0.0  | 7.4  | 42-46   |
| Newcastle.....                           | G                 | 14.9   | 10.9 | 12.6 | 9.7  | 6.0  | 3.4  | 4.2  | 3.4 | 4.2  | 8.5  | 12.6 | 10.9 | 52.1 | 30      |
|  | L                 | 2.0    | 1.1  | 0.4  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0 | *    | 0.6  | 0.5  | 0.9  | 19.5 | 30      |
| Okiep.....                               | G                 | 1.5    | 2.5  | 2.1  | 2.7  | 3.5  | 5.5  | 4.4  | 3.7 | 2.9  | 2.5  | 2.6  | 1.7  | 12.9 | 22-23   |
|  | L                 | 0.0    | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0 | 0.0  | 0.0  | 0.0  | 0.0  | 1.9  | 77-83   |
| Phalaborwa.....                          | G                 | 13.2   | 8.5  | 3.6  | 4.1  | 0.9  | 2.0  | 1.0  | 0.8 | 1.5  | 2.5  | 5.3  | 5.3  | 27.4 | 9-10    |
|  | L                 | 4.5    | 0.7  | 0.1  | 0.5  | 0.0  | 0.0  | 0.0  | 0.0 | *    | 0.2  | 0.5  | 0.6  | na   | 3-10    |
| Pietersburg.....                         | G                 | 6.3    | 7.5  | 8.3  | 3.2  | 2.5  | 2.5  | 0.4  | 0.5 | 2.2  | 4.0  | 5.5  | 9.9  | 26.1 | 17      |
|  | L                 | 0.5    | 0.1  | 0.2  | *    | 0.0  | 0.0  | 0.0  | 0.0 | 0.0  | 0.5  | 0.5  | 1.5  | 13.4 | 13-17   |
| Piet Retief.....                         | G                 | 15.0   | 10.7 | 9.9  | 8.0  | 5.4  | 4.1  | 5.3  | 3.6 | 6.5  | 9.1  | 11.6 | 11.5 | 50.3 | 55-56   |
|  | L                 | 0.9    | 0.7  | 0.9  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0 | 0.0  | 0.6  | 1.5  | 2.2  | 23.2 | 51-55   |
| Port Elizabeth.....                      | G                 | 5.3    | 5.5  | 10.7 | 5.5  | 9.3  | 7.2  | 6.2  | 6.7 | 11.5 | 7.9  | 9.6  | 6.5  | 34.1 | 101     |
|  | L                 | 0.0    | 0.2  | 0.2  | 0.1  | *    | 0.0  | 0.0  | 0.2 | 0.5  | 0.0  | *    | 0.2  | 10.4 | 99-101  |
| Port Saint John.....                     | G                 | 16.1   | 15.7 | 20.0 | 13.6 | 22.5 | 19.1 | 20.9 | 9.5 | 19.5 | 16.7 | 13.5 | 13.2 | 79.5 | 72-73   |
|  | L                 | 1.4    | 1.1  | 1.0  | 0.1  | 0.1  | 0.0  | 0.0  | 0.0 | 0.4  | 1.5  | 0.5  | 1.2  | 23.7 | 65-70   |
| Pretoria.....                            | G                 | 5.7    | 10.7 | 9.0  | 5.5  | 4.6  | 4.1  | 4.3  | 1.5 | 4.5  | 5.5  | 10.0 | 9.2  | 43.1 | 22      |
|  | L                 | 1.6    | 1.7  | 1.5  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0 | 0.0  | 0.6  | 0.7  | 0.6  | 35.3 | 22      |
| Queenstown.....                          | G                 | 9.0    | 8.7  | 7.6  | 4.2  | 4.1  | 3.1  | 5.7  | 2.5 | 6.1  | 6.2  | 9.0  | 11.1 | 43.2 | 57-59   |
|  | L                 | 0.3    | 0.3  | 0.4  | 0.2  | 0.0  | 0.0  | 0.0  | 0.0 | 0.0  | *    | 0.1  | *    | 11.0 | 53-55   |
| Sheeprun.....                            | G                 | 9.2    | 7.7  | 7.5  | 4.1  | 1.5  | 4.5  | 1.0  | 2.2 | 1.7  | 4.3  | 5.9  | 6.3  | 39.4 | 5-6     |
|  | L                 | 3.5    | 1.9  | 0.5  | 1.3  | 0.1  | 0.1  | 0.0  | *   | 0.1  | 0.9  | 1.0  | 1.7  | 27.3 | 4-5     |
| Somerset East.....                       | G                 | 9.4    | 7.5  | 9.5  | 5.3  | 5.3  | 3.5  | 5.4  | 3.0 | 5.5  | 7.4  | 7.5  | 5.5  | 35.3 | 55      |
|  | L                 | 0.2    | 0.5  | 0.5  | 0.2  | 0.1  | 0.0  | 0.0  | 0.0 | 0.1  | 0.2  | 0.2  | 0.2  | 10.6 | 53      |
| Uppington.....                           | G                 | 5.5    | 4.5  | 4.9  | 4.4  | 1.7  | 0.7  | 1.1  | 0.5 | 0.5  | 1.3  | 1.9  | 1.9  | 11.9 | 16-17   |
|  | L                 | 0.0    | 0.0  | 0.1  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0 | 0.0  | 0.0  | 0.0  | 0.0  | 3.4  | 14-17   |
| Vanwyksvlei.....                         | G                 | 3.7    | 6.3  | 5.5  | 3.5  | 2.0  | 1.5  | 1.9  | 2.4 | 2.7  | 1.5  | 3.5  | 1.7  | 14.4 | 55      |
|  | L                 | 0.0    | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0 | 0.0  | 0.0  | 0.0  | 0.0  | 0.7  | 55      |
| Wepener.....                             | G                 | 10.7   | 9.0  | 9.5  | 6.7  | 4.2  | 3.2  | 2.5  | 3.1 | 4.9  | 7.0  | 6.0  | 6.9  | 41.3 | 45-49   |
|  | L                 | 0.5    | 0.9  | 0.4  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0 | 0.0  | *    | 0.2  | 0.2  | 16.0 | 45-49   |
| Willowmore.....                          | G                 | 3.4    | 2.5  | 4.1  | 2.4  | 2.9  | 1.2  | 1.2  | 1.7 | 1.4  | 1.0  | 3.9  | 1.9  | 13.1 | 5-9     |
|  | L                 | 0.1    | 0.1  | 0.5  | 0.4  | *    | 0.1  | *    | 0.1 | *    | 0.2  | 0.2  | *    | 7.1  | 5-5     |
| South-West Africa:                       |                   |        |      |      |      |      |      |      |     |      |      |      |      |      |         |
| Gobabis.....                             | G                 | 9.7    | 9.7  | 10.5 | 5.0  | 1.7  | 1.2  | 0.4  | 0.5 | 3.0  | 3.0  | 5.2  | 5.2  | 30.5 | 50      |
|  | L                 | 0.1    | 0.1  | 0.1  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0 | 0.0  | 0.0  | 0.0  | *    | 5.2  | 57-60   |
| Keetmanshoop.....                        | G                 | 3.4    | 4.5  | 7.2  | 3.4  | 1.4  | 1.2  | 0.3  | 0.4 | 1.5  | 0.5  | 2.2  | 4.5  | 13.5 | 45-46   |
|  | L                 | 0.0    | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0 | 0.0  | 0.0  | 0.0  | 0.0  | 1.7  | 42-46   |
| Mariental.....                           | G                 | 5.5    | 4.0  | 3.4  | 2.0  | 0.5  | 0.4  | 0.2  | 0.3 | 0.4  | 0.5  | 2.0  | 1.5  | 13.9 | 5       |
|  | L                 | *      | *    | 0.1  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0 | 0.0  | 0.0  | 0.0  | 0.1  | na   | 3-5     |
| Ondangua.....                            | G                 | 17.2   | 11.7 | 9.5  | 6.7  | 1.3  | 0.7  | 0.4  | 0.1 | 2.2  | 2.7  | 5.2  | 10.5 | 10.9 | 44      |
|  | L                 | 0.3    | 0.1  | 0.1  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0 | 0.0  | 0.0  | *    | 0.0  | 7.9  | 44      |
| Outjo.....                               | G                 | 7.5    | 6.5  | 4.5  | 3.3  | 0.5  | *    | *    | 1.2 | 0.7  | 1.5  | 7.5  | 9.4  | 30.7 | 7-8     |
|  | L                 | 0.2    | 1.7  | 0.5  | 0.2  | 0.0  | 0.0  | 0.0  | 0.0 | 0.0  | *    | 0.4  | 0.5  | 11.7 | 5-5     |
| Tauneh.....                              | G                 | 14.5   | 14.5 | 5.4  | 7.3  | 2.3  | 0.5  | 0.3  | *   | 0.7  | 3.2  | 5.5  | 5.2  | 35.2 | 40      |
|  | L                 | 1.1    | 0.4  | 0.1  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0 | 0.0  | 0.0  | 0.1  | 0.1  | 9.2  | 40      |
| Windhoek.....                            | G                 | 12.2   | 11.9 | 12.3 | 6.5  | 1.9  | 0.7  | 1.2  | 1.5 | 2.1  | 1.7  | 5.9  | 6.3  | 30.7 | 75      |
|  | L                 | 0.1    | 0.0  | *    | 0.0  | 0.0  | 0.0  | 0.0  | 0.0 | 0.0  | 0.0  | 0.0  | 0.0  | 3.5  | 75-75   |
| Swaziland:                               |                   |        |      |      |      |      |      |      |     |      |      |      |      |      |         |
| Mbabane.....                             | G                 | 23.4   | 24.5 | 33.9 | 13.3 | 5.5  | 4.9  | 4.5  | 3.1 | 6.1  | 14.1 | 13.0 | 14.3 | 51.9 | 45      |
|  | L                 | 3.7    | 2.2  | 2.2  | 0.4  | 0.0  | 0.0  | 0.0  | 0.0 | 0.7  | 0.9  | 2.4  | 4.4  | 35.4 | 45      |
| Stet.....                                | G                 | 19.7   | 17.3 | 20.7 | 10.0 | 5.0  | 5.9  | 4.7  | 4.3 | 4.9  | 5.7  | 10.0 | 12.5 | 59.7 | 50      |
|  | L                 | 1.0    | 0.5  | 0.4  | 0.1  | 0.0  | 0.0  | 0.0  | 0.0 | 0.0  | 0.2  | 0.5  | 0.7  | 14.4 | 50      |

na Data not available.

\* &lt; 0.05 inch.

FIGURE 36. MEAN CLOUDINESS (%)  
(Based on 3 observations per day)

| COUNTRY AND STATION         |     |     |     |     |     |     |     |     |     |     |     |     | DATA BASE INFO |       |       |
|-----------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|-------|-------|
|                             | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANN            | PDR   | CYR   |
| Botswana:                   |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |
| Francistown.....            | 50  | 55  | 46  | 42  | 19  | 21  | 23  | 15  | 14  | 34  | 57  | 63  | 37             | 6     | 6     |
| Gaborone.....               | 57  | 51  | 47  | 41  | 22  | 20  | 18  | 14  | 19  | 38  | 54  | 54  | 36             | 7     | 6-7   |
| Ghanai.....                 | 63  | 57  | 54  | 43  | 16  | 18  | 18  | 9   | 9   | 37  | 60  | 60  | 36             | 6     | 6     |
| Mauri.....                  | 63  | 65  | 54  | 36  | 16  | 14  | 13  | 9   | 14  | 33  | 58  | 65  | 37             | 9     | 9     |
| Shakawe.....                | 66  | 67  | 55  | 40  | 16  | 13  | 13  | 10  | 10  | 35  | 64  | 62  | 38             | 8     | 8     |
| Tsabong.....                | 42  | 37  | 42  | 29  | 19  | 18  | 16  | 9   | 14  | 25  | 41  | 37  | 27             | 6-7   | 6-7   |
| Tsano.....                  | 52  | 48  | 47  | 35  | 13  | 17  | 15  | 9   | 11  | 30  | 47  | 44  | 31             | 6     | 6     |
| Republic of South Africa:   |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |
| Alexander Bay.....          | 39  | 39  | 39  | 36  | 37  | 31  | 33  | 32  | 36  | 41  | 35  | 39  | 36             | 12    | 11-12 |
| Beaufort West.....          | 39  | 34  | 42  | 41  | 40  | 32  | 30  | 31  | 36  | 41  | 41  | 37  | 37             | 11-12 | 11-12 |
| Bethlehem.....              | 57  | 49  | 48  | 41  | 27  | 28  | 16  | 17  | 30  | 44  | 55  | 53  | 38             | 10-11 | 10-11 |
| Calvinia.....               | 30  | 30  | 23  | 30  | 34  | 30  | 26  | 28  | 28  | 32  | 25  | 20  | 26             | 12    | 9-10  |
| Cape Agulhas.....           | 54  | 56  | 59  | 56  | 55  | 51  | 51  | 49  | 53  | 55  | 54  | 51  | 54             | 12    | 12    |
| Cape Columbine.....         | 30  | 33  | 37  | 43  | 49  | 47  | 42  | 43  | 43  | 43  | 38  | 32  | 40             | 12    | 12    |
| Cape Saint Lucia.....       | 61  | 53  | 45  | 46  | 33  | 30  | 29  | 34  | 48  | 61  | 69  | 60  | 47             | 11    | 11    |
| Cape Town/D.F. Malan.....   | 33  | 35  | 38  | 44  | 52  | 52  | 47  | 49  | 47  | 46  | 41  | 36  | 43             | 11-12 | 11-12 |
| De Aar.....                 | 36  | 31  | 35  | 35  | 29  | 28  | 20  | 19  | 28  | 35  | 35  | 32  | 30             | 10-11 | 10-11 |
| Durban/Louis Botha.....     | 70  | 61  | 56  | 52  | 40  | 32  | 31  | 37  | 55  | 70  | 74  | 69  | 54             | 11-12 | 11-12 |
| East London.....            | 65  | 58  | 60  | 50  | 44  | 34  | 34  | 39  | 51  | 61  | 62  | 60  | 51             | 12    | 11-12 |
| Katecourt.....              | 60  | 54  | 47  | 42  | 28  | 22  | 18  | 22  | 37  | 52  | 62  | 59  | 42             | 11    | 11    |
| Johannesburg/Jan Smuts..... | 55  | 51  | 43  | 39  | 22  | 20  | 16  | 15  | 25  | 39  | 56  | 55  | 36             | 12    | 12    |
| Kimberley.....              | 47  | 41  | 46  | 37  | 31  | 25  | 21  | 20  | 29  | 38  | 44  | 42  | 35             | 12    | 12    |
| Kuruman.....                | 42  | 39  | 39  | 28  | 20  | 18  | 12  | 10  | 19  | 27  | 37  | 35  | 27             | 9-11  | 9-11  |
| Lydenburg.....              | 61  | 51  | 43  | 48  | 20  | 21  | 15  | 15  | 22  | 42  | 64  | 56  | 38             | 5-6   | 5-6   |
| Macoville.....              | 61  | 64  | 42  | 44  | 19  | 31  | 20  | 24  | 25  | 37  | 49  | 43  | 38             | 2-3   | 2-3   |
| Mafeking.....               | 57  | 51  | 46  | 41  | 22  | 21  | 15  | 12  | 22  | 38  | 55  | 52  | 36             | 9-10  | 9-10  |
| Marnitz.....                | 51  | 48  | 36  | 35  | 19  | 22  | 18  | 14  | 20  | 34  | 50  | 52  | 33             | 11-12 | 10-12 |
| Matroosberg.....            | 31  | 26  | 34  | 39  | 39  | 33  | 33  | 33  | 35  | 41  | 35  | 28  | 34             | 10-11 | 10-11 |
| Middelburg.....             | 43  | 37  | 43  | 41  | 36  | 29  | 26  | 25  | 33  | 41  | 40  | 35  | 36             | 11    | 10-11 |
| Okiep.....                  | 17  | 19  | 23  | 25  | 28  | 27  | 24  | 24  | 24  | 29  | 22  | 15  | 23             | 12-13 | 12-13 |
| Phalaborwa.....             | 57  | 54  | 44  | 44  | 23  | 22  | 22  | 26  | 30  | 43  | 59  | 59  | 40             | 10    | 9-10  |
| Pietersburg.....            | 56  | 55  | 44  | 43  | 23  | 24  | 20  | 19  | 25  | 41  | 59  | 58  | 39             | 12    | 12    |
| Piet Retief.....            | 61  | 56  | 47  | 45  | 24  | 21  | 19  | 23  | 35  | 54  | 66  | 62  | 43             | 11-12 | 11-12 |
| Port Elizabeth.....         | 51  | 49  | 51  | 47  | 42  | 35  | 37  | 40  | 47  | 53  | 52  | 49  | 40             | 12    | 12    |
| Port Saint Johns.....       | 69  | 61  | 57  | 49  | 40  | 30  | 32  | 37  | 54  | 65  | 66  | 65  | 52             | 12    | 12    |
| Queenstown.....             | 57  | 52  | 52  | 45  | 38  | 29  | 29  | 29  | 39  | 53  | 54  | 48  | 44             | 9-11  | 8-10  |
| Sheeprun.....               | 70  | 59  | 55  | 51  | 35  | 31  | 28  | 28  | 42  | 60  | 64  | 60  | 49             | 5-6   | 5-6   |
| Uppington.....              | 35  | 32  | 37  | 29  | 27  | 22  | 18  | 17  | 25  | 31  | 32  | 30  | 28             | 12    | 12    |
| Wepener.....                | 52  | 47  | 47  | 39  | 32  | 25  | 23  | 21  | 29  | 41  | 45  | 46  | 35             | 12-13 | 12-13 |
| Willowmore.....             | 28  | 27  | 36  | 33  | 29  | 22  | 24  | 25  | 29  | 34  | 31  | 24  | 29             | 8-9   | 8-9   |
| South-West Africa:          |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |
| Gobabis.....                | 39  | 36  | 33  | 23  | 8   | 6   | 4   | 4   | 10  | 21  | 36  | 31  | 21             | 8     | 8     |
| Kentmanshoop.....           | 32  | 32  | 31  | 24  | 21  | 16  | 13  | 14  | 21  | 27  | 28  | 27  | 24             | 9-10  | 7-8   |
| Mariental.....              | 34  | 35  | 30  | 21  | 10  | 9   | 7   | 8   | 12  | 22  | 30  | 22  | 20             | 8     | 8     |
| Outjo.....                  | 46  | 47  | 42  | 29  | 10  | 6   | 6   | 8   | 11  | 23  | 37  | 35  | 25             | 8     | 8     |
| Windhoek.....               | 54  | 50  | 56  | 34  | 22  | 11  | 8   | 12  | 20  | 30  | 45  | 50  | 33             | 9-10  | 7-8   |



FIGURE 37. MEAN CLOUDINESS (%) AT SPECIFIED HOURS

| COUNTRY AND STATION         | HOUR<br>(LST) |     |     |     |     |     |     |     |     |     |     |     |     | DATA BASE INFO |       |       |  |
|-----------------------------|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|-------|-------|--|
|                             |               | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANN            | POR   | CYR   |  |
| Botswana:                   |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |  |
| Francistown.....            | 0800          | 51  | 58  | 47  | 46  | 21  | 27  | 26  | 19  | 17  | 34  | 57  | 54  | 39             | 6     | 6     |  |
| Gaborone.....               | 0800          | 56  | 50  | 45  | 44  | 21  | 21  | 20  | 15  | 23  | 38  | 55  | 57  | 37             | 7     | 7     |  |
| Ghanai.....                 | 0700          | 56  | 52  | 52  | 43  | 16  | 18  | 16  | 12  | 9   | 35  | 53  | 51  | 34             | 8     | 6     |  |
| Maun.....                   | 0800          | 61  | 64  | 51  | 31  | 16  | 18  | 16  | 9   | 15  | 32  | 55  | 62  | 35             | 9     | 9     |  |
| Rhakawe.....                | 0700          | 63  | 66  | 53  | 40  | 15  | 16  | 16  | 11  | 10  | 33  | 63  | 60  | 37             | 5     | 5     |  |
| Tsabong.....                | 0700          | 38  | 33  | 41  | 31  | 21  | 20  | 19  | 11  | 14  | 27  | 37  | 31  | 27             | 6-7   | 6-7   |  |
| Tsane.....                  | 0700          | 46  | 40  | 47  | 35  | 13  | 18  | 18  | 12  | 12  | 28  | 41  | 39  | 29             | 6     | 6     |  |
| Republic of South Africa:   |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |  |
| Alexander Bay.....          | 0700          | 59  | 58  | 60  | 51  | 49  | 41  | 43  | 45  | 51  | 55  | 50  | 57  | 52             | 12    | 12    |  |
| Beaufort West.....          | 0800          | 39  | 37  | 48  | 47  | 43  | 37  | 35  | 36  | 43  | 45  | 43  | 35  | 41             | 11-12 | 11-12 |  |
| Bethlehem.....              | 0800          | 54  | 50  | 49  | 44  | 30  | 27  | 20  | 20  | 31  | 42  | 52  | 47  | 39             | 10-11 | 10-11 |  |
| Calvinia.....               | 0700          | 20  | 22  | 26  | 35  | 40  | 37  | 33  | 34  | 37  | 37  | 27  | 19  | 31             | 12    | 12    |  |
| Cape Agulhas.....           | 0700          | 61  | 65  | 66  | 66  | 61  | 55  | 55  | 57  | 64  | 63  | 65  | 60  | 61             | 12    | 12    |  |
| Cape Columbine.....         | 0700          | 37  | 42  | 45  | 51  | 55  | 52  | 50  | 49  | 53  | 52  | 47  | 41  | 45             | 12    | 12    |  |
| Cape Saint Lucia.....       | 0800          | 66  | 57  | 53  | 51  | 39  | 31  | 31  | 39  | 55  | 66  | 73  | 66  | 52             | 11    | 11    |  |
| Cape Town/D.F. Malan.....   | 0700          | 37  | 40  | 44  | 49  | 55  | 55  | 51  | 53  | 55  | 54  | 48  | 40  | 45             | 11-12 | 11-12 |  |
| De Aar.....                 | 0800          | 27  | 24  | 30  | 36  | 32  | 29  | 23  | 23  | 30  | 36  | 29  | 24  | 28             | 10-11 | 10-11 |  |
| Durban/Louis Botha.....     | 0800          | 67  | 66  | 50  | 48  | 35  | 31  | 29  | 35  | 51  | 66  | 70  | 61  | 50             | 11-12 | 11-12 |  |
| East London.....            | 0800          | 54  | 59  | 60  | 51  | 45  | 38  | 38  | 44  | 52  | 61  | 60  | 59  | 53             | 12    | 12    |  |
| Estcourt.....               | 0800          | 58  | 55  | 51  | 49  | 33  | 27  | 23  | 27  | 42  | 54  | 62  | 55  | 45             | 11    | 11    |  |
| Johannesburg/Jan Smuts..... | 0800          | 58  | 48  | 41  | 40  | 24  | 20  | 20  | 17  | 26  | 38  | 54  | 53  | 36             | 12    | 12    |  |
| Kimberley.....              | 0800          | 37  | 35  | 39  | 33  | 29  | 28  | 22  | 21  | 28  | 34  | 37  | 31  | 31             | 12    | 12    |  |
| Kuruman.....                | 0800          | 34  | 35  | 36  | 29  | 20  | 22  | 13  | 12  | 21  | 27  | 33  | 30  | 25             | 9-11  | 9-11  |  |
| Lydenburg.....              | 0800          | 57  | 47  | 40  | 44  | 19  | 19  | 14  | 16  | 22  | 37  | 57  | 52  | 35             | 5-6   | 5-6   |  |
| Macoville.....              | 0800          | 63  | 71  | 45  | 50  | 22  | 30  | 21  | 29  | 28  | 18  | 52  | 49  | 42             | 2-3   | 2-3   |  |
| Mafeking.....               | 0800          | 50  | 45  | 42  | 39  | 20  | 22  | 15  | 12  | 22  | 34  | 50  | 46  | 33             | 9-10  | 9-10  |  |
| Marnitz.....                | 0800          | 50  | 48  | 34  | 34  | 18  | 20  | 17  | 14  | 21  | 55  | 53  | 54  | 33             | 11-12 | 10-12 |  |
| Matroosberg.....            | 0700          | 32  | 32  | 39  | 45  | 45  | 39  | 39  | 40  | 45  | 47  | 39  | 27  | 39             | 10-11 | 10-11 |  |
| Middelburg.....             | 0800          | 41  | 38  | 44  | 43  | 37  | 32  | 31  | 31  | 38  | 44  | 41  | 33  | 35             | 11    | 10-11 |  |
| Okiep.....                  | 0700          | 20  | 19  | 25  | 26  | 32  | 29  | 27  | 29  | 28  | 35  | 34  | 19  | 26             | 12-13 | 12-13 |  |
| Phalaborwa.....             | 0800          | 69  | 64  | 55  | 54  | 31  | 25  | 20  | 34  | 41  | 54  | 71  | 69  | 49             | 10    | 10    |  |
| Pietersburg.....            | 0800          | 62  | 62  | 50  | 48  | 25  | 25  | 23  | 23  | 31  | 40  | 65  | 63  | 43             | 12    | 12    |  |
| Piet Retief.....            | 0800          | 62  | 62  | 53  | 49  | 28  | 24  | 22  | 25  | 35  | 53  | 65  | 63  | 45             | 11-12 | 11-12 |  |
| Port Elizabeth.....         | 0800          | 55  | 53  | 55  | 53  | 43  | 35  | 42  | 43  | 50  | 55  | 55  | 53  | 50             | 12    | 12    |  |
| Port Saint John.....        | 0800          | 67  | 61  | 57  | 50  | 40  | 31  | 33  | 35  | 55  | 64  | 63  | 61  | 52             | 12    | 12    |  |
| Queenstown.....             | 0800          | 55  | 53  | 55  | 51  | 43  | 34  | 35  | 34  | 45  | 55  | 54  | 45  | 47             | 9-11  | 9-11  |  |
| Sheeprun.....               | 0800          | 64  | 57  | 55  | 55  | 35  | 35  | 32  | 30  | 45  | 59  | 60  | 53  | 49             | 5-6   | 5-6   |  |
| Uppington.....              | 0700          | 30  | 25  | 34  | 28  | 28  | 25  | 22  | 21  | 25  | 33  | 28  | 25  | 25             | 12    | 12    |  |
| Wepener.....                | 0800          | 39  | 38  | 40  | 38  | 33  | 32  | 24  | 23  | 30  | 41  | 42  | 34  | 35             | 12-13 | 12-13 |  |
| Willowmore.....             | 0800          | 35  | 35  | 43  | 43  | 34  | 27  | 22  | 31  | 40  | 41  | 34  | 27  | 25             | 5-9   | 5-9   |  |
| South-West Africa:          |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |  |
| Gobabis.....                | 0700          | 30  | 28  | 27  | 20  | 7   | 8   | 5   | 0   | 9   | 18  | 27  | 20  | 17             | 8     | 8     |  |
| Ketmanshoop.....            | 0700          | 25  | 25  | 25  | 23  | 23  | 18  | 15  | 15  | 22  | 26  | 23  | 19  | 22             | 9-10  | 9-10  |  |
| Mariental.....              | 0700          | 27  | 30  | 25  | 19  | 11  | 11  | 9   | 9   | 12  | 20  | 22  | 13  | 17             | 8     | 8     |  |
| Outjo.....                  | 0700          | 40  | 42  | 35  | 25  | 9   | 5   | 7   | 9   | 10  | 20  | 30  | 29  | 22             | 8     | 8     |  |
| Windhoek.....               | 0700          | 45  | 45  | 45  | 28  | 16  | 11  | 8   | 10  | 17  | 25  | 35  | 33  | 27             | 9-10  | 9-10  |  |
| Botswana:                   |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |  |
| Francistown.....            | 1400          | 68  | 60  | 59  | 52  | 26  | 27  | 29  | 19  | 16  | 40  | 66  | 71  | 45             | 6     | 6     |  |
| Gaborone.....               | 1400          | 63  | 58  | 50  | 50  | 27  | 26  | 23  | 19  | 21  | 41  | 59  | 55  | 41             | 6-7   | 6-7   |  |
| Ghanai.....                 | 1300          | 71  | 60  | 67  | 53  | 20  | 18  | 17  | 11  | 11  | 41  | 65  | 71  | 43             | 6     | 6     |  |
| Maun.....                   | 1400          | 69  | 69  | 63  | 45  | 20  | 16  | 14  | 11  | 14  | 37  | 67  | 72  | 41             | 9     | 9     |  |
| Rhakawe.....                | 1300          | 72  | 73  | 65  | 52  | 23  | 16  | 14  | 12  | 14  | 43  | 73  | 71  | 44             | 5     | 5     |  |
| Tsabong.....                | 1300          | 48  | 42  | 48  | 34  | 22  | 20  | 16  | 11  | 14  | 27  | 45  | 42  | 31             | 6-7   | 6-7   |  |
| Tsane.....                  | 1300          | 55  | 55  | 55  | 41  | 16  | 21  | 18  | 10  | 11  | 34  | 54  | 52  | 30             | 6     | 6     |  |
| Republic of South Africa:   |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |  |
| Alexander Bay.....          | 1300          | 22  | 19  | 21  | 24  | 29  | 25  | 26  | 23  | 23  | 28  | 20  | 20  | 24             | 12    | 12    |  |
| Beaufort West.....          | 1400          | 40  | 34  | 44  | 45  | 44  | 37  | 34  | 34  | 40  | 45  | 43  | 39  | 40             | 11-12 | 11-12 |  |
| Bethlehem.....              | 1400          | 61  | 54  | 53  | 47  | 31  | 27  | 18  | 20  | 35  | 51  | 61  | 60  | 43             | 10-11 | 10-11 |  |
| Calvinia.....               | 1300          | 21  | 21  | 26  | 35  | 38  | 35  | 32  | 31  | 33  | 29  | 22  | 29  | 29             | 12    | 11-12 |  |
| Cape Agulhas.....           | 1300          | 44  | 47  | 54  | 54  | 55  | 52  | 50  | 52  | 41  | 45  | 41  | 50  | 50             | 12    | 12    |  |
| Cape Columbine.....         | 1300          | 25  | 29  | 33  | 45  | 51  | 50  | 44  | 45  | 41  | 42  | 35  | 28  | 39             | 12    | 12    |  |
| Cape Saint Lucia.....       | 1400          | 54  | 49  | 42  | 44  | 34  | 33  | 31  | 35  | 45  | 55  | 62  | 50  | 45             | 11    | 10-11 |  |
| Cape Town.....              | 1300          | 30  | 33  | 35  | 46  | 55  | 54  | 51  | 51  | 49  | 45  | 35  | 34  | 43             | 11-12 | 11-12 |  |
| De Aar.....                 | 1400          | 43  | 38  | 44  | 44  | 36  | 31  | 26  | 22  | 33  | 44  | 41  | 41  | 37             | 10-11 | 10-11 |  |

FIGURE 37. MEAN CLOUDINESS (Continued)

| COUNTRY AND STATION                   | HOUR<br>(LST) |     |     |     |     |     |     |     |     |     |     |     |     | DATA BASE INFO |       |       |  |
|---------------------------------------|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|-------|-------|--|
|                                       |               | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANN            | POR   | CYR   |  |
| Republic of South Africa (Continued): |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |  |
| Durban/Louis Botha.....               | 1400          | 61  | 53  | 46  | 47  | 38  | 31  | 28  | 34  | 52  | 65  | 67  | 62  | 49             | 11-12 | 11-12 |  |
| East London.....                      | 1400          | 60  | 54  | 57  | 52  | 49  | 37  | 38  | 42  | 51  | 61  | 61  | 57  | 52             | 12    | 12    |  |
| Estcourt.....                         | 1400          | 50  | 43  | 39  | 39  | 28  | 22  | 18  | 21  | 34  | 47  | 55  | 50  | 37             | 11    | 11    |  |
| Johannesburg/Jan Smuts.....           | 1400          | 61  | 58  | 51  | 47  | 26  | 23  | 18  | 18  | 25  | 42  | 50  | 50  | 41             | 12    | 12    |  |
| Kimberley.....                        | 1400          | 54  | 47  | 53  | 44  | 38  | 29  | 24  | 22  | 32  | 44  | 50  | 50  | 40             | 12    | 12    |  |
| Kuruman.....                          | 1400          | 48  | 44  | 47  | 36  | 27  | 23  | 16  | 14  | 23  | 34  | 44  | 44  | 33             | 9-11  | 9-11  |  |
| Lydenburg.....                        | 1400          | 65  | 55  | 52  | 56  | 27  | 29  | 20  | 24  | 29  | 49  | 69  | 62  | 45             | 5-6   | 5-6   |  |
| Macoville.....                        | 1400          | 68  | 76  | 58  | 56  | 30  | 40  | 27  | 27  | 31  | 38  | 59  | 52  | 47             | 2-3   | 2-3   |  |
| Mafeking.....                         | 1400          | 65  | 61  | 59  | 51  | 30  | 26  | 18  | 17  | 27  | 46  | 67  | 60  | 44             | 9-10  | 9-10  |  |
| Marnitz.....                          | 1400          | 61  | 59  | 50  | 46  | 62  | 28  | 23  | 18  | 24  | 37  | 58  | 59  | 41             | 11-12 | 10-12 |  |
| Matroosberg.....                      | 1300          | 31  | 25  | 35  | 41  | 44  | 39  | 36  | 35  | 35  | 42  | 37  | 30  | 36             | 10-11 | 10-11 |  |
| Middelburg.....                       | 1400          | 46  | 41  | 48  | 45  | 40  | 32  | 31  | 28  | 36  | 47  | 46  | 43  | 40             | 11    | 10-11 |  |
| Okiep.....                            | 1300          | 17  | 20  | 23  | 27  | 32  | 32  | 25  | 25  | 26  | 28  | 25  | 18  | 25             | 12-13 | 12-13 |  |
| Phalaborwa.....                       | 1400          | 60  | 59  | 51  | 51  | 29  | 28  | 25  | 30  | 33  | 45  | 61  | 62  | 45             | 9-10  | 9-10  |  |
| Pietersburg.....                      | 1400          | 63  | 63  | 55  | 52  | 31  | 31  | 24  | 24  | 30  | 44  | 65  | 62  | 45             | 12    | 12    |  |
| Piet Retief.....                      | 1400          | 62  | 55  | 48  | 50  | 27  | 24  | 21  | 24  | 37  | 56  | 66  | 62  | 44             | 11-12 | 11-12 |  |
| Port Elizabeth.....                   | 1400          | 44  | 42  | 45  | 47  | 45  | 38  | 38  | 39  | 47  | 48  | 46  | 43  | 43             | 12    | 12    |  |
| Port Saint Johns.....                 | 1400          | 60  | 53  | 51  | 48  | 42  | 31  | 33  | 36  | 50  | 63  | 61  | 59  | 49             | 12    | 12    |  |
| Queenstown.....                       | 1400          | 55  | 48  | 50  | 46  | 40  | 32  | 30  | 29  | 39  | 54  | 53  | 49  | 44             | 9-11  | 9-11  |  |
| Sheeprun.....                         | 1400          | 68  | 53  | 54  | 51  | 35  | 33  | 29  | 30  | 42  | 60  | 63  | 59  | 49             | 5-6   | 5-6   |  |
| Uptington.....                        | 1300          | 40  | 36  | 41  | 36  | 32  | 24  | 20  | 18  | 25  | 38  | 37  | 34  | 31             | 12    | 12    |  |
| Walvis Bay.....                       | 1300          | 52  | 58  | 55  | 42  | 44  | 30  | 30  | 45  | 51  | 51  | 47  | 56  | 47             | 7-8   | 5-6   |  |
| Wepener.....                          | 1400          | 64  | 59  | 58  | 48  | 41  | 34  | 28  | 26  | 36  | 50  | 59  | 57  | 47             | 12-13 | 12-13 |  |
| Willowmore.....                       | 1400          | 24  | 23  | 32  | 32  | 31  | 24  | 24  | 26  | 26  | 33  | 32  | 28  | 27             | 5-6   | 7-9   |  |
| South-West Africa:                    |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |  |
| Globaba.....                          | 1300          | 43  | 42  | 41  | 28  | 11  | 7   | 4   | 4   | 11  | 24  | 43  | 38  | 25             | 8     | 8     |  |
| Keetmanshoop.....                     | 1300          | 33  | 33  | 35  | 27  | 23  | 19  | 15  | 15  | 20  | 28  | 31  | 29  | 25             | 9-10  | 9-10  |  |
| Mariental.....                        | 1300          | 35  | 36  | 33  | 22  | 12  | 9   | 7   | 7   | 11  | 22  | 36  | 26  | 21             | 8     | 8     |  |
| Outjo.....                            | 1300          | 47  | 47  | 47  | 34  | 12  | 7   | 6   | 8   | 11  | 26  | 40  | 40  | 27             | 8     | 8     |  |
| Windhoek.....                         | 1300          | 60  | 59  | 59  | 43  | 21  | 12  | 10  | 12  | 22  | 37  | 55  | 55  | 37             | 9-10  | 9-10  |  |
| Botswana:                             |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |  |
| Francistown.....                      | 2000          | 49  | 41  | 32  | 30  | 10  | 11  | 13  | 8   | 9   | 27  | 48  | 53  | 28             | 6     | 6     |  |
| Gaborone.....                         | 2000          | 52  | 44  | 39  | 30  | 17  | 15  | 12  | 8   | 12  | 36  | 49  | 47  | 30             | 6-7   | 6-7   |  |
| Ghanai.....                           | 1900          | 62  | 50  | 43  | 33  | 11  | 10  | 12  | 5   | 6   | 35  | 58  | 58  | 32             | 5-6   | 5-6   |  |
| Maun.....                             | 2000          | 60  | 61  | 47  | 30  | 12  | 11  | 9   | 7   | 13  | 30  | 54  | 61  | 33             | 9     | 8-9   |  |
| Nhakawe.....                          | 1900          | 63  | 61  | 43  | 30  | 11  | 8   | 8   | 8   | 6   | 27  | 55  | 56  | 31             | 8     | 8     |  |
| Tlokweng.....                         | 1900          | 41  | 34  | 38  | 21  | 15  | 14  | 14  | 6   | 13  | 21  | 40  | 37  | 24             | 6-7   | 6-7   |  |
| Tlokweng.....                         | 1900          | 52  | 47  | 38  | 28  | 11  | 12  | 10  | 6   | 9   | 28  | 45  | 41  | 27             | 8     | 6     |  |
| Republic of South Africa:             |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |  |
| Alexander Bay.....                    | 1900          | 37  | 39  | 37  | 33  | 33  | 28  | 29  | 25  | 34  | 40  | 36  | 41  | 34             | 10-11 | 10-11 |  |
| Beaufort West.....                    | 2000          | 39  | 29  | 35  | 30  | 31  | 27  | 22  | 23  | 26  | 32  | 37  | 37  | 31             | 11-12 | 10-12 |  |
| Bethlehem.....                        | 2000          | 55  | 44  | 41  | 31  | 19  | 16  | 9   | 10  | 24  | 39  | 50  | 52  | 32             | 10-11 | 10-11 |  |
| Calvinia.....                         | 1900          | 16  | 18  | 20  | 23  | 25  | 25  | 19  | 22  | 19  | 25  | 22  | 20  | 21             | 11-12 | 10-12 |  |
| Cape Agulhas.....                     | 1900          | 55  | 55  | 57  | 47  | 45  | 42  | 44  | 40  | 45  | 50  | 52  | 52  | 49             | 12    | 11-12 |  |
| Cape Columbine.....                   | 1900          | 26  | 29  | 32  | 34  | 40  | 40  | 32  | 35  | 34  | 36  | 31  | 27  | 33             | 12    | 12    |  |
| Cape Saint Lucia.....                 | 2000          | 63  | 51  | 42  | 42  | 26  | 24  | 26  | 27  | 43  | 61  | 71  | 65  | 45             | 11    | 10-11 |  |
| Cape Town/D.F. Malan.....             | 1900          | 31  | 32  | 35  | 38  | 46  | 47  | 41  | 42  | 39  | 40  | 38  | 34  | 35             | 11-12 | 11-12 |  |
| De Aar.....                           | 2000          | 40  | 30  | 31  | 24  | 20  | 16  | 10  | 11  | 20  | 26  | 33  | 33  | 24             | 10-11 | 10-11 |  |
| Durban/Louis Botha.....               | 2000          | 52  | 74  | 71  | 61  | 44  | 34  | 35  | 43  | 62  | 79  | 85  | 83  | 63             | 11-12 | 11-12 |  |
| East London.....                      | 2000          | 71  | 60  | 63  | 46  | 38  | 28  | 27  | 32  | 50  | 61  | 65  | 63  | 50             | 11-12 | 10-12 |  |
| Estcourt.....                         | 2000          | 71  | 60  | 62  | 39  | 24  | 17  | 14  | 15  | 35  | 55  | 68  | 70  | 44             | 11    | 11    |  |
| Johannesburg/Jan Smuts.....           | 2000          | 52  | 48  | 55  | 31  | 15  | 16  | 12  | 10  | 22  | 39  | 53  | 55  | 32             | 12    | 12    |  |
| Kimberley.....                        | 2000          | 50  | 42  | 44  | 35  | 26  | 19  | 17  | 16  | 26  | 37  | 44  | 46  | 34             | 12    | 12    |  |
| Kuruman.....                          | 2000          | 43  | 38  | 34  | 18  | 13  | 10  | 8   | 6   | 12  | 21  | 35  | 39  | 23             | 9-11  | 9-11  |  |
| Lydenburg.....                        | 2000          | 59  | 50  | 36  | 43  | 15  | 17  | 13  | 14  | 16  | 40  | 66  | 54  | 35             | 5-6   | 5-6   |  |
| Macoville.....                        | 2000          | 51  | 47  | 26  | 27  | 6   | 22  | 13  | 15  | 16  | 26  | 36  | 30  | 26             | 2-3   | 2-3   |  |
| Mafeking.....                         | 2000          | 55  | 49  | 36  | 33  | 16  | 16  | 10  | 8   | 16  | 33  | 49  | 51  | 31             | 9-10  | 9-10  |  |
| Marnitz.....                          | 2000          | 43  | 37  | 24  | 25  | 12  | 17  | 12  | 10  | 15  | 29  | 40  | 44  | 26             | 11-12 | 10-12 |  |
| Matroosberg.....                      | 1900          | 25  | 22  | 27  | 30  | 28  | 25  | 24  | 24  | 25  | 33  | 30  | 27  | 27             | 10-11 | 10-11 |  |
| Middelburg.....                       | 2000          | 41  | 32  | 38  | 34  | 30  | 21  | 16  | 16  | 24  | 31  | 34  | 35  | 30             | 10-11 | 10-11 |  |
| Okiep.....                            | 1900          | 16  | 17  | 20  | 16  | 21  | 22  | 19  | 20  | 17  | 24  | 18  | 16  | 16             | 12-13 | 12-13 |  |
| Phalaborwa.....                       | 2000          | 42  | 38  | 25  | 29  | 10  | 12  | 12  | 13  | 17  | 30  | 46  | 46  | 27             | 9-10  | 9-10  |  |
| Pietersburg.....                      | 2000          | 42  | 39  | 27  | 28  | 13  | 15  | 12  | 10  | 15  | 33  | 49  | 45  | 27             | 12    | 12    |  |
| Piet Retief.....                      | 2000          | 60  | 50  | 39  | 36  | 15  | 15  | 15  | 17  | 31  | 52  | 66  | 61  | 38             | 11-12 | 11-12 |  |

FIGURE 37. MEAN CLOUDINESS (Continued)

| COUNTRY AND STATION                   | HOUR<br>(LST) |     |     |     |     |     |     |     |     |     |     |     |     | DATA BASE INFO |       |       |
|---------------------------------------|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|-------|-------|
|                                       |               | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANN            | FOR   | CYR   |
| Republic of South Africa (Continued): |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |
| Port Elisabeth.....                   | 2000          | 88  | 81  | 83  | 43  | 39  | 30  | 32  | 38  | 45  | 53  | 57  | 52  | 46             | 12    | 12    |
| Port Saint Johns.....                 | 2000          | 79  | 70  | 64  | 49  | 37  | 28  | 30  | 37  | 55  | 67  | 73  | 74  | 88             | 12    | 11-12 |
| Queenstown.....                       | 2000          | 60  | 54  | 52  | 39  | 30  | 22  | 21  | 22  | 31  | 49  | 50  | 51  | 41             | 8-9   | 8-9   |
| Rheepun.....                          | 2000          | 78  | 67  | 58  | 48  | 29  | 24  | 23  | 24  | 38  | 60  | 68  | 69  | 49             | 8-9   | 8-9   |
| Uppington.....                        | 1900          | 36  | 32  | 34  | 22  | 21  | 16  | 13  | 12  | 21  | 27  | 32  | 30  | 25             | 12    | 12    |
| Wepener.....                          | 2000          | 53  | 43  | 43  | 31  | 20  | 19  | 16  | 13  | 21  | 33  | 43  | 46  | 32             | 12-13 | 12-13 |
| Willowmore.....                       | 2000          | 26  | 22  | 32  | 25  | 22  | 16  | 19  | 18  | 22  | 29  | 27  | 21  | 23             | 8-9   | 7-9   |
| South-West Africa:                    |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |
| Globabis.....                         | 1900          | 44  | 38  | 32  | 22  | 7   | 8   | 3   | 4   | 9   | 21  | 38  | 30  | 21             | 8     | 8     |
| Keetmanshoop.....                     | 1900          | 39  | 35  | 33  | 22  | 16  | 12  | 10  | 10  | 21  | 28  | 31  | 33  | 24             | 9-10  | 9-10  |
| Mariental.....                        | 1900          | 39  | 39  | 32  | 21  | 8   | 7   | 7   | 8   | 13  | 23  | 33  | 28  | 21             | 8     | 8     |
| Outjo.....                            | 1900          | 53  | 51  | 43  | 38  | 8   | 8   | 8   | 8   | 11  | 23  | 39  | 38  | 26             | 8     | 8     |
| Windhoek.....                         | 1900          | 61  | 61  | 57  | 37  | 16  | 10  | 9   | 13  | 21  | 31  | 48  | 51  | 35             | 8     | 8     |

FIGURE 38. MEAN NUMBER OF DAYS WITH TOTAL CLOUD COVER  $\frac{1}{8}$  OR LESS AT SPECIFIED HOURS

| COUNTRY AND STATION         | HOUR<br>(LST) |     |     |     |     |     |     |     |     |     |     |     |     | DATA BASE INFO |       |       |  |
|-----------------------------|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|-------|-------|--|
|                             |               | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANN            | FOR   | CYR   |  |
| Botswana:                   |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |  |
| Francistown.....            | 0800          | 8   | 9   | 14  | 14  | 23  | 21  | 21  | 25  | 24  | 18  | 9   | 8   | 191            | 6     | 6     |  |
| Gaborone.....               | 0800          | 9   | 10  | 12  | 14  | 23  | 22  | 24  | 25  | 21  | 16  | 9   | 9   | 194            | 7     | 7     |  |
| Ghanzi.....                 | 0700          | 8   | 10  | 11  | 13  | 24  | 24  | 26  | 26  | 27  | 17  | 9   | 10  | 204            | 6     | 6     |  |
| Maun.....                   | 0800          | 8   | 6   | 13  | 19  | 26  | 25  | 28  | 28  | 25  | 18  | 9   | 8   | 211            | 9     | 9     |  |
| Rhakaue.....                | 0700          | 6   | 8   | 8   | 14  | 25  | 24  | 24  | 26  | 25  | 17  | 8   | 6   | 186            | 8     | 8     |  |
| Tsabong.....                | 0700          | 18  | 19  | 16  | 19  | 24  | 24  | 24  | 27  | 26  | 22  | 17  | 20  | 224            | 6-7   | 6-7   |  |
| Tsane.....                  | 0700          | 12  | 13  | 13  | 17  | 26  | 24  | 24  | 20  | 25  | 21  | 14  | 16  | 230            | 6     | 6     |  |
| Republic of South Africa:   |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |  |
| Alexander Bay.....          | 0700          | 12  | 11  | 11  | 14  | 15  | 17  | 17  | 18  | 14  | 12  | 14  | 12  | 164            | 12    | 12    |  |
| Beaufort West.....          | 0800          | 17  | 16  | 14  | 14  | 14  | 17  | 18  | 17  | 14  | 14  | 14  | 18  | 186            | 11-12 | 11-12 |  |
| Bethlehem.....              | 0800          | 10  | 11  | 13  | 15  | 21  | 20  | 24  | 24  | 19  | 15  | 11  | 12  | 196            | 10-11 | 10-11 |  |
| Calvinia.....               | 0700          | 24  | 21  | 21  | 18  | 17  | 18  | 20  | 19  | 17  | 17  | 21  | 24  | 230            | 12    | 12    |  |
| Cape Agulhas.....           | 0700          | 7   | 6   | 6   | 6   | 8   | 10  | 10  | 10  | 7   | 7   | 7   | 8   | 91             | 12    | 12    |  |
| Cape Columbine.....         | 0700          | 18  | 14  | 15  | 12  | 11  | 12  | 13  | 13  | 11  | 13  | 14  | 17  | 164            | 12    | 12    |  |
| Cape Saint Lucia.....       | 0800          | 6   | 8   | 11  | 12  | 16  | 19  | 20  | 17  | 10  | 7   | 4   | 6   | 135            | 11    | 11    |  |
| Cape Town/D.F. Malan.....   | 0700          | 19  | 16  | 16  | 13  | 11  | 10  | 12  | 13  | 11  | 12  | 14  | 18  | 165            | 11-12 | 11-12 |  |
| De Aar.....                 | 0800          | 22  | 20  | 21  | 18  | 19  | 20  | 23  | 23  | 20  | 18  | 21  | 23  | 246            | 10-11 | 10-11 |  |
| Durban/Louis Botha.....     | 0800          | 7   | 10  | 14  | 14  | 17  | 20  | 21  | 19  | 13  | 8   | 7   | 10  | 159            | 11-12 | 11-12 |  |
| East London.....            | 0800          | 8   | 9   | 10  | 13  | 15  | 17  | 17  | 15  | 12  | 9   | 9   | 10  | 143            | 12    | 12    |  |
| Katecourt.....              | 0800          | 10  | 9   | 13  | 13  | 10  | 21  | 23  | 21  | 17  | 12  | 9   | 11  | 178            | 11    | 11    |  |
| Johannesburg/Jan Smuts..... | 0800          | 11  | 13  | 17  | 17  | 23  | 24  | 24  | 26  | 22  | 18  | 11  | 11  | 216            | 12    | 12    |  |
| Kimberley.....              | 0800          | 18  | 17  | 17  | 18  | 21  | 20  | 23  | 24  | 20  | 19  | 17  | 20  | 234            | 12    | 12    |  |
| Kuruman.....                | 0800          | 19  | 17  | 18  | 20  | 23  | 22  | 26  | 27  | 22  | 21  | 18  | 20  | 262            | 9-11  | 9-11  |  |
| Lydenburg.....              | 0800          | 8   | 12  | 16  | 14  | 24  | 24  | 26  | 27  | 23  | 18  | 9   | 11  | 212            | 8-9   | 8-9   |  |
| Macquarie.....              | 0800          | 9   | 4   | 15  | 11  | 23  | 19  | 24  | 21  | 21  | 14  | 12  | 12  | 183            | 2-3   | 2-3   |  |
| Mafeking.....               | 0800          | 11  | 12  | 15  | 16  | 23  | 22  | 26  | 27  | 22  | 18  | 11  | 12  | 216            | 9-10  | 9-10  |  |
| Marnitz.....                | 0800          | 12  | 11  | 19  | 18  | 25  | 23  | 28  | 26  | 22  | 17  | 11  | 11  | 221            | 11-12 | 10-12 |  |
| Matroosberg.....            | 0700          | 19  | 18  | 17  | 14  | 14  | 15  | 16  | 17  | 14  | 14  | 16  | 20  | 194            | 10-11 | 10-11 |  |
| Middelburg.....             | 0800          | 17  | 16  | 16  | 18  | 18  | 19  | 20  | 20  | 18  | 16  | 16  | 19  | 211            | 11    | 10-11 |  |
| Okiep.....                  | 0700          | 24  | 22  | 21  | 21  | 20  | 21  | 21  | 21  | 20  | 19  | 21  | 24  | 267            | 12-13 | 12-13 |  |
| Phalaborwa.....             | 0800          | 6   | 7   | 10  | 11  | 20  | 21  | 22  | 19  | 16  | 12  | 8   | 6   | 155            | 10    | 10    |  |
| Pietersburg.....            | 0800          | 8   | 7   | 12  | 14  | 22  | 22  | 22  | 23  | 20  | 14  | 7   | 8   | 180            | 12    | 12    |  |
| Piet Retief.....            | 0800          | 10  | 8   | 12  | 14  | 22  | 23  | 24  | 22  | 18  | 13  | 8   | 9   | 181            | 11-12 | 11-12 |  |
| Port Elisabeth.....         | 0800          | 12  | 11  | 12  | 12  | 16  | 18  | 18  | 15  | 12  | 10  | 10  | 11  | 153            | 12    | 12    |  |
| Port Saint Johns.....       | 0800          | 7   | 8   | 11  | 11  | 15  | 18  | 18  | 16  | 10  | 8   | 8   | 8   | 139            | 12    | 12    |  |
| Queenstown.....             | 0800          | 12  | 11  | 12  | 12  | 16  | 18  | 19  | 18  | 14  | 11  | 12  | 15  | 171            | 9-11  | 9-11  |  |
| Rheepun.....                | 0800          | 8   | 10  | 10  | 11  | 17  | 17  | 19  | 21  | 13  | 10  | 9   | 13  | 159            | 8-9   | 8-9   |  |
| Uppington.....              | 0700          | 20  | 19  | 18  | 21  | 21  | 21  | 24  | 23  | 20  | 19  | 20  | 22  | 249            | 12    | 12    |  |
| Wepener.....                | 0800          | 17  | 15  | 16  | 16  | 19  | 18  | 22  | 23  | 19  | 17  | 15  | 19  | 216            | 12-13 | 12-13 |  |
| Willowmore.....             | 0800          | 19  | 17  | 17  | 16  | 19  | 22  | 21  | 21  | 17  | 17  | 19  | 22  | 227            | 8-9   | 8-9   |  |

Footnote at end of table

FIGURE 38. DAYS WITH TOTAL CLOUD COVER  $\frac{1}{4}$  OR LESS (Continued)

| COUNTRY AND STATION         | HOUR<br>(LST) |     |     |     |     |     |     |     |     |     |     |     |     | DATA BASE INFO |       |       |  |
|-----------------------------|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|-------|-------|--|
|                             |               | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANN            | FOR   | CTR   |  |
| South-West Africa:          |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |  |
| Gobabis.....                | 0700          | 20  | 18  | 20  | 22  | 25  | 27  | 28  | 29  | 26  | 24  | 20  | 24  | 285            | 8     | 8     |  |
| Keetmanshoop.....           | 0700          | 21  | 17  | 21  | 23  | 22  | 23  | 25  | 24  | 21  | 20  | 22  | 24  | 262            | 9-10  | 9-10  |  |
| Mariental.....              | 0700          | 21  | 18  | 22  | 24  | 27  | 26  | 28  | 28  | 26  | 24  | 22  | 27  | 291            | 8     | 8     |  |
| Outjo.....                  | 0700          | 14  | 13  | 15  | 21  | 28  | 28  | 28  | 29  | 26  | 23  | 18  | 19  | 200            | 8     | 8     |  |
| Windhoek.....               | 0700          | 14  | 11  | 13  | 19  | 25  | 26  | 28  | 27  | 24  | 20  | 17  | 18  | 241            | 9-10  | 9-10  |  |
| Botswana:                   |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |  |
| Francistown.....            | 1400          | 3   | 4   | 6   | 9   | 19  | 19  | 19  | 23  | 23  | 13  | 2   | 3   | 144            | 6     | 6     |  |
| Gaberones.....              | 1400          | 3   | 4   | 7   | 8   | 19  | 20  | 21  | 23  | 21  | 14  | 4   | 5   | 149            | 6-7   | 6-7   |  |
| Ghanai.....                 | 1300          | 2   | 2   | 3   | 8   | 23  | 23  | 25  | 27  | 26  | 13  | 3   | 3   | 158            | 6     | 6     |  |
| Maun.....                   | 1400          | 2   | 2   | 5   | 10  | 23  | 24  | 25  | 27  | 25  | 16  | 2   | 2   | 164            | 9     | 9     |  |
| Shakawe.....                | 1300          | *   | 1   | 1   | 6   | 19  | 22  | 24  | 25  | 24  | 11  | 1   | 1   | 187            | 8     | 8     |  |
| Tsabong.....                | 1300          | 10  | 12  | 11  | 17  | 23  | 23  | 25  | 27  | 25  | 20  | 10  | 12  | 214            | 6-7   | 6-7   |  |
| Tsano.....                  | 1300          | 5   | 5   | 5   | 13  | 25  | 22  | 24  | 27  | 26  | 17  | 7   | 7   | 182            | 6     | 6     |  |
| Republic of South Africa:   |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |  |
| Alexander Bay.....          | 1300          | 24  | 23  | 23  | 22  | 21  | 22  | 22  | 23  | 23  | 21  | 24  | 25  | 274            | 12    | 12    |  |
| Beaufort West.....          | 1400          | 18  | 17  | 13  | 13  | 13  | 16  | 18  | 17  | 18  | 18  | 14  | 18  | 178            | 11-12 | 11-12 |  |
| Bethlehem.....              | 1400          | 8   | 6   | 7   | 11  | 18  | 19  | 23  | 23  | 17  | 11  | 5   | 4   | 132            | 10-11 | 10-11 |  |
| Calvinia.....               | 1300          | 24  | 21  | 21  | 17  | 17  | 17  | 21  | 19  | 18  | 18  | 19  | 22  | 235            | 12    | 11-12 |  |
| Cape Agulhas.....           | 1300          | 13  | 12  | 10  | 10  | 8   | 9   | 11  | 11  | 11  | 11  | 13  | 15  | 135            | 12    | 12    |  |
| Cape Columbine.....         | 1300          | 22  | 18  | 19  | 13  | 12  | 11  | 14  | 14  | 18  | 16  | 17  | 22  | 192            | 12    | 12    |  |
| Cape Saint Lucia.....       | 1400          | 10  | 11  | 14  | 13  | 17  | 17  | 19  | 18  | 14  | 10  | 7   | 12  | 162            | 11    | 10-11 |  |
| Cape Town/D.F. Malan.....   | 1300          | 21  | 18  | 18  | 14  | 10  | 10  | 12  | 12  | 12  | 15  | 17  | 20  | 179            | 11-12 | 11-12 |  |
| De Aar.....                 | 1400          | 14  | 15  | 13  | 13  | 18  | 19  | 22  | 22  | 18  | 14  | 15  | 18  | 198            | 10-11 | 10-11 |  |
| Durban/Louis Botha.....     | 1400          | 9   | 11  | 14  | 14  | 18  | 20  | 21  | 20  | 13  | 8   | 7   | 8   | 162            | 11-12 | 11-12 |  |
| East London.....            | 1400          | 10  | 11  | 10  | 12  | 13  | 17  | 18  | 18  | 12  | 9   | 9   | 9   | 144            | 12    | 12    |  |
| Katcourt.....               | 1400          | 11  | 13  | 16  | 17  | 22  | 23  | 25  | 24  | 19  | 14  | 10  | 11  | 206            | 11    | 11    |  |
| Johannesburg/Jan Smuts..... | 1400          | 8   | 8   | 7   | 10  | 21  | 22  | 24  | 25  | 20  | 15  | 8   | 8   | 164            | 12    | 12    |  |
| Kimberley.....              | 1400          | 9   | 10  | 9   | 13  | 16  | 20  | 22  | 23  | 18  | 14  | 11  | 10  | 174            | 12    | 12    |  |
| Kuruman.....                | 1400          | 10  | 11  | 11  | 16  | 20  | 21  | 25  | 26  | 21  | 17  | 13  | 12  | 203            | 9-11  | 9-11  |  |
| Lydenburg.....              | 1400          | 2   | 6   | 8   | 8   | 20  | 18  | 24  | 22  | 19  | 12  | 3   | 8   | 146            | 8-6   | 8-6   |  |
| Macoville.....              | 1400          | 3   | 1   | 7   | 8   | 17  | 14  | 19  | 20  | 18  | 17  | 7   | 10  | 140            | 2-3   | 2-3   |  |
| Mafeking.....               | 1400          | 4   | 4   | 8   | 9   | 19  | 20  | 23  | 26  | 19  | 12  | 4   | 8   | 148            | 9-10  | 9-10  |  |
| Mamits.....                 | 1400          | 3   | 4   | 7   | 10  | 20  | 19  | 21  | 23  | 21  | 16  | 6   | 6   | 186            | 11-12 | 10-12 |  |
| Matroosberg.....            | 1300          | 18  | 19  | 17  | 14  | 18  | 18  | 17  | 17  | 16  | 14  | 16  | 19  | 196            | 10-11 | 10-11 |  |
| Middelburg.....             | 1400          | 12  | 14  | 12  | 13  | 16  | 19  | 20  | 21  | 18  | 12  | 13  | 14  | 184            | 11    | 10-11 |  |
| Okiep.....                  | 1300          | 25  | 21  | 22  | 21  | 19  | 19  | 22  | 22  | 21  | 20  | 22  | 25  | 258            | 12-13 | 12-13 |  |
| Phalaborwa.....             | 1400          | 6   | 6   | 9   | 10  | 19  | 18  | 20  | 19  | 18  | 14  | 6   | 6   | 182            | 9-10  | 9-10  |  |
| Pieteraburg.....            | 1100          | 5   | 4   | 7   | 9   | 18  | 18  | 22  | 22  | 19  | 14  | 6   | 6   | 147            | 12    | 12    |  |
| Piet Retief.....            | 1400          | 6   | 8   | 12  | 12  | 21  | 21  | 23  | 22  | 17  | 11  | 8   | 6   | 163            | 11-12 | 11-12 |  |
| Port Elizabeth.....         | 1100          | 15  | 14  | 14  | 13  | 15  | 16  | 17  | 16  | 13  | 13  | 13  | 15  | 175            | 12    | 12    |  |
| Port Saint John.....        | 1400          | 8   | 10  | 11  | 12  | 14  | 18  | 18  | 17  | 12  | 8   | 8   | 9   | 143            | 12    | 12    |  |
| Queenstown.....             | 1100          | 11  | 11  | 12  | 13  | 16  | 19  | 20  | 20  | 17  | 10  | 11  | 12  | 172            | 9-11  | 9-11  |  |
| Sheeprun.....               | 1400          | 4   | 9   | 8   | 10  | 15  | 17  | 20  | 19  | 14  | 8   | 6   | 8   | 139            | 8-6   | 8-6   |  |
| Uppington.....              | 1300          | 16  | 16  | 16  | 17  | 18  | 22  | 23  | 24  | 21  | 19  | 16  | 18  | 224            | 12    | 12    |  |
| Walvis Bay.....             | 1300          | 13  | 9   | 12  | 16  | 17  | 20  | 21  | 14  | 13  | 14  | 14  | 11  | 173            | 7-8   | 8-6   |  |
| Wepener.....                | 1400          | 8   | 7   | 7   | 12  | 15  | 18  | 21  | 21  | 17  | 12  | 8   | 7   | 180            | 12-13 | 12-13 |  |
| Willowmore.....             | 1400          | 22  | 21  | 20  | 19  | 19  | 22  | 22  | 21  | 21  | 19  | 18  | 23  | 247            | 8-9   | 7-9   |  |
| South-West Africa:          |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |  |
| Gobabis.....                | 1300          | 11  | 11  | 11  | 19  | 27  | 28  | 29  | 29  | 26  | 21  | 11  | 12  | 234            | 8     | 8     |  |
| Keetmanshoop.....           | 1300          | 17  | 15  | 16  | 19  | 22  | 23  | 25  | 24  | 22  | 19  | 18  | 18  | 238            | 9-10  | 9-10  |  |
| Mariental.....              | 1300          | 16  | 14  | 17  | 21  | 26  | 27  | 28  | 29  | 26  | 23  | 16  | 20  | 264            | 8     | 8     |  |
| Outjo.....                  | 1300          | 9   | 9   | 9   | 14  | 26  | 28  | 28  | 28  | 26  | 20  | 11  | 11  | 219            | 8     | 8     |  |
| Windhoek.....               | 1300          | 7   | 6   | 6   | 12  | 22  | 25  | 28  | 27  | 22  | 15  | 9   | 8   | 187            | 9-10  | 9-10  |  |
| Botswana:                   |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |  |
| Francistown.....            | 2000          | 15  | 15  | 10  | 18  | 27  | 27  | 26  | 27  | 27  | 21  | 13  | 11  | 245            | 6     | 6     |  |
| Gaberones.....              | 2000          | 10  | 12  | 15  | 17  | 24  | 24  | 26  | 27  | 25  | 15  | 10  | 12  | 217            | 6-7   | 6-7   |  |
| Ghanai.....                 | 1900          | 7   | 10  | 14  | 17  | 27  | 27  | 27  | 29  | 27  | 16  | 9   | 7   | 216            | 5-6   | 5-6   |  |
| Maun.....                   | 2000          | 8   | 6   | 14  | 19  | 27  | 26  | 28  | 28  | 25  | 19  | 10  | 8   | 219            | 9     | 8-9   |  |
| Shakawe.....                | 1900          | 6   | 7   | 14  | 18  | 26  | 27  | 27  | 27  | 28  | 18  | 6   | 9   | 214            | 5     | 5     |  |
| Tsabong.....                | 1900          | 16  | 15  | 17  | 24  | 26  | 25  | 27  | 29  | 26  | 23  | 16  | 17  | 203            | 6-7   | 6-7   |  |
| Tsano.....                  | 1900          | 10  | 12  | 16  | 19  | 27  | 26  | 27  | 28  | 27  | 20  | 14  | 14  | 237            | 6     | 6     |  |

Footnote at end of table.

FIGURE 38. DAYS WITH TOTAL CLOUD COVER  $\frac{1}{2}$  OR LESS (Continued)

| COUNTRY AND STATION         | HOUR<br>(LST) |     |     |     |     |     |     |     |     |     |     |     |     | DATA BASE INFO |       |       |
|-----------------------------|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|-------|-------|
|                             |               | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANN            | FOR   | CYN   |
| Republic of South Africa:   |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |
| Alexander Bay.....          | 1900          | 19  | 17  | 19  | 20  | 21  | 21  | 21  | 23  | 19  | 17  | 18  | 17  | 230            | 10-11 | 10-11 |
| Beaufort West.....          | 2000          | 15  | 18  | 18  | 19  | 19  | 21  | 22  | 23  | 20  | 19  | 17  | 17  | 227            | 11-12 | 10-12 |
| Bethlehem.....              | 2000          | 9   | 14  | 18  | 15  | 24  | 24  | 27  | 28  | 21  | 16  | 12  | 10  | 219            | 10-11 | 10-11 |
| Calvinia.....               | 1900          | 26  | 22  | 23  | 22  | 22  | 22  | 24  | 23  | 23  | 22  | 22  | 24  | 276            | 11-12 | 10-12 |
| Cape Agulhas.....           | 1900          | 9   | 8   | 3   | 13  | 14  | 15  | 15  | 16  | 14  | 13  | 10  | 10  | 146            | 12    | 11-12 |
| Cape Columbine.....         | 1900          | 22  | 19  | 20  | 18  | 16  | 16  | 19  | 19  | 18  | 18  | 19  | 21  | 224            | 12    | 12    |
| Cape Saint Lucia.....       | 2000          | 8   | 11  | 18  | 14  | 21  | 21  | 21  | 21  | 18  | 8   | 6   | 7   | 169            | 11    | 10-11 |
| Cape Town/D.F. Malan.....   | 1900          | 21  | 18  | 20  | 18  | 15  | 14  | 16  | 16  | 17  | 16  | 17  | 20  | 203            | 11-12 | 11-12 |
| De Aar.....                 | 2000          | 17  | 18  | 20  | 21  | 24  | 28  | 27  | 28  | 23  | 22  | 19  | 20  | 263            | 10-11 | 10-11 |
| Durban/Louis Botha.....     | 2000          | 3   | 5   | 6   | 9   | 15  | 17  | 19  | 16  | 9   | 4   | 3   | 3   | 109            | 11-12 | 11-12 |
| East London.....            | 2000          | 6   | 8   | 9   | 14  | 17  | 20  | 22  | 20  | 18  | 9   | 7   | 8   | 135            | 11-12 | 10-12 |
| Estcourt.....               | 2000          | 6   | 9   | 13  | 17  | 23  | 24  | 27  | 28  | 19  | 12  | 8   | 7   | 190            | 11    | 11    |
| Johannesburg/Jan Smuts..... | 2000          | 11  | 12  | 18  | 20  | 25  | 24  | 27  | 28  | 22  | 16  | 10  | 10  | 224            | 12    | 12    |
| Kimberley.....              | 2000          | 12  | 14  | 18  | 18  | 21  | 23  | 26  | 28  | 21  | 18  | 14  | 14  | 220            | 12    | 12    |
| Kuruman.....                | 2000          | 18  | 15  | 17  | 24  | 27  | 27  | 28  | 29  | 26  | 24  | 17  | 18  | 203            | 9-11  | 9-11  |
| Lydenburg.....              | 2000          | 8   | 11  | 17  | 14  | 26  | 24  | 25  | 26  | 25  | 18  | 8   | 11  | 210            | 8-9   | 8-9   |
| Macuville.....              | 2000          | 14  | 12  | 21  | 21  | 29  | 22  | 27  | 26  | 28  | 22  | 18  | 20  | 227            | 2-3   | 2-3   |
| Maifeking.....              | 2000          | 9   | 11  | 17  | 18  | 25  | 24  | 27  | 28  | 25  | 18  | 12  | 11  | 225            | 9-10  | 9-10  |
| Marnisa.....                | 2000          | 14  | 15  | 23  | 22  | 26  | 24  | 26  | 27  | 25  | 20  | 17  | 15  | 255            | 11-12 | 10-12 |
| Matroosberg.....            | 1900          | 20  | 21  | 21  | 20  | 21  | 20  | 22  | 23  | 21  | 19  | 19  | 21  | 248            | 10-11 | 10-11 |
| Middelburg.....             | 2000          | 17  | 18  | 18  | 18  | 21  | 23  | 20  | 26  | 22  | 20  | 19  | 17  | 244            | 10-11 | 10-11 |
| Okiep.....                  | 1900          | 25  | 23  | 24  | 24  | 24  | 23  | 24  | 24  | 25  | 28  | 24  | 25  | 289            | 12-13 | 12-13 |
| Phalaborwa.....             | 2000          | 16  | 16  | 22  | 20  | 27  | 26  | 26  | 26  | 24  | 20  | 14  | 14  | 251            | 9-10  | 9-10  |
| Pietersburg.....            | 2000          | 18  | 18  | 21  | 20  | 27  | 25  | 27  | 28  | 25  | 20  | 12  | 18  | 247            | 12    | 12    |
| Piet Retief.....            | 2000          | 10  | 12  | 17  | 19  | 25  | 25  | 26  | 28  | 21  | 14  | 9   | 10  | 213            | 11-12 | 11-12 |
| Port Elizabeth.....         | 2000          | 11  | 11  | 12  | 15  | 16  | 18  | 18  | 16  | 14  | 12  | 10  | 12  | 165            | 12    | 12    |
| Port Saint John.....        | 2000          | 4   | 6   | 8   | 12  | 17  | 20  | 20  | 17  | 11  | 8   | 6   | 8   | 132            | 12    | 11-12 |
| Queenstown.....             | 2000          | 10  | 11  | 15  | 16  | 20  | 23  | 24  | 23  | 20  | 13  | 11  | 12  | 195            | 8-9   | 8-9   |
| Sheeprun.....               | 2000          | 3   | 7   | 10  | 14  | 20  | 22  | 23  | 22  | 18  | 10  | 8   | 7   | 164            | 8-9   | 8-9   |
| Uppington.....              | 1900          | 18  | 17  | 19  | 23  | 24  | 25  | 26  | 27  | 23  | 21  | 18  | 20  | 239            | 12    | 12    |
| Wepener.....                | 2000          | 12  | 14  | 16  | 19  | 24  | 24  | 25  | 26  | 22  | 19  | 15  | 14  | 230            | 12-13 | 12-13 |
| Willowmore.....             | 2000          | 23  | 21  | 20  | 22  | 24  | 25  | 25  | 25  | 23  | 21  | 22  | 25  | 278            | 8-9   | 7-9   |
| South-West Africa:          |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |
| Globabla.....               | 1900          | 14  | 15  | 18  | 22  | 28  | 28  | 30  | 30  | 26  | 22  | 18  | 17  | 265            | 8     | 8     |
| Keetmanshoop.....           | 1900          | 10  | 15  | 18  | 22  | 25  | 25  | 27  | 27  | 22  | 20  | 18  | 18  | 252            | 9-10  | 9-10  |
| Mariental.....              | 1900          | 17  | 14  | 19  | 23  | 29  | 27  | 28  | 28  | 25  | 22  | 18  | 20  | 270            | 8     | 8     |
| Outjo.....                  | 1900          | 9   | 9   | 10  | 19  | 28  | 28  | 29  | 28  | 26  | 21  | 13  | 13  | 234            | 8     | 8     |
| Windhoek.....               | 1900          | 8   | 6   | 9   | 17  | 25  | 25  | 28  | 26  | 22  | 19  | 12  | 10  | 208            | 8     | 8     |

\* &lt; 0.5 day.

FIGURE 39. MEAN NUMBER OF DAYS WITH TOTAL CLOUD COVER  $\frac{1}{2}$  OR MORE AT SPECIFIED HOURS

|                           |               |     |     |     |     |     |     |     |     |     |     |     |     |     | DATA BASE INFO |       |
|---------------------------|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|-------|
| COUNTRY AND STATION       | HOUR<br>(LST) | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANN | FOR            | CYR   |
|                           |               |     |     |     |     |     |     |     |     |     |     |     |     |     |                |       |
| Botswana:                 |               |     |     |     |     |     |     |     |     |     |     |     |     |     |                |       |
| Francistown.....          | 0800          | 16  | 14  | 12  | 11  | 4   | 6   | 6   | 5   | 3   | 8   | 14  | 17  | 115 | 6              | 6     |
| Gaborone.....             | 0800          | 13  | 10  | 10  | 10  | 5   | 4   | 5   | 3   | 4   | 9   | 13  | 14  | 100 | 7              | 7     |
| Ghanzi.....               | 0700          | 13  | 11  | 12  | 10  | 8   | 4   | 3   | 2   | 2   | 8   | 12  | 12  | 91  | 6              | 6     |
| Maun.....                 | 0800          | 17  | 15  | 13  | 6   | 3   | 3   | 4   | 2   | 3   | 7   | 13  | 17  | 102 | 9              | 9     |
| Mmakwato.....             | 0700          | 15  | 17  | 11  | 7   | 3   | 3   | 4   | 2   | 2   | 6   | 15  | 14  | 99  | 8              | 8     |
| Tlokweng.....             | 0700          | 7   | 6   | 8   | 6   | 4   | 4   | 4   | 2   | 2   | 6   | 8   | 8   | 61  | 6-7            | 6-7   |
| Tlokweng.....             | 0700          | 9   | 6   | 11  | 7   | 2   | 3   | 4   | 2   | 2   | 6   | 9   | 8   | 60  | 6              | 6     |
| Republic of South Africa: |               |     |     |     |     |     |     |     |     |     |     |     |     |     |                |       |
| Alexander Bay.....        | 0700          | 17  | 15  | 18  | 14  | 14  | 11  | 12  | 13  | 14  | 15  | 13  | 15  | 172 | 12             | 12    |
| Beaufort West.....        | 0800          | 9   | 8   | 12  | 12  | 11  | 9   | 8   | 9   | 11  | 12  | 9   | 8   | 118 | 11-12          | 11-12 |
| Bethlehem.....            | 0800          | 13  | 11  | 12  | 11  | 7   | 6   | 5   | 6   | 7   | 9   | 12  | 10  | 106 | 10-11          | 10-11 |
| Calvinia.....             | 0700          | 4   | 5   | 7   | 8   | 11  | 10  | 9   | 10  | 10  | 10  | 6   | 4   | 92  | 12             | 12    |
| Cape Agulhas.....         | 0700          | 15  | 16  | 18  | 17  | 16  | 13  | 14  | 15  | 17  | 17  | 16  | 15  | 180 | 12             | 12    |
| Cape Columbine.....       | 0700          | 10  | 10  | 12  | 13  | 14  | 13  | 13  | 13  | 14  | 14  | 11  | 10  | 146 | 12             | 12    |

Footnote at end of table.

FIGURE 39. DAYS WITH TOTAL CLOUD COVER % OR MORE (Continued)

| COUNTRY AND STATION                   | HOUR<br>(LST) |     |     |     |     |     |     |     |     |     |     |     |     | DATA BASE INFO |       |       |  |
|---------------------------------------|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|-------|-------|--|
|                                       |               | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANN            | FOR   | CVR   |  |
| Republic of South Africa (Continued): |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |  |
| Cape Saint Lucia.....                 | 0800          | 18  | 12  | 13  | 12  | 9   | 6   | 7   | 9   | 14  | 18  | 20  | 17  | 184            | 11    | 11    |  |
| Cape Town/D.F. Malan.....             | 0700          | 8   | 9   | 11  | 12  | 18  | 14  | 14  | 18  | 18  | 19  | 9   | 149 | 11-12          | 11-12 |       |  |
| De Aar.....                           | 0800          | 8   | 4   | 7   | 9   | 8   | 7   | 6   | 6   | 7   | 9   | 0   | 8   | 77             | 10-11 | 10-11 |  |
| Durban/Louis Botha.....               | 0800          | 20  | 14  | 14  | 13  | 10  | 8   | 8   | 9   | 14  | 19  | 19  | 17  | 166            | 11-12 | 11-12 |  |
| East London.....                      | 0800          | 18  | 15  | 17  | 14  | 12  | 9   | 10  | 11  | 14  | 17  | 16  | 16  | 169            | 12    | 12    |  |
| Estcourt.....                         | 0800          | 16  | 15  | 14  | 13  | 8   | 6   | 6   | 7   | 11  | 18  | 17  | 16  | 142            | 11    | 11    |  |
| Johannesburg/Jan Smuts.....           | 0800          | 14  | 11  | 10  | 10  | 8   | 4   | 8   | 4   | 6   | 9   | 13  | 14  | 103            | 12    | 12    |  |
| Kimberley.....                        | 0800          | 8   | 7   | 9   | 6   | 6   | 6   | 8   | 8   | 6   | 7   | 8   | 6   | 79             | 12    | 12    |  |
| Kuruman.....                          | 0800          | 9   | 7   | 9   | 7   | 4   | 6   | 4   | 3   | 4   | 6   | 7   | 7   | 73             | 9-11  | 9-11  |  |
| Lydenburg.....                        | 0800          | 14  | 10  | 8   | 10  | 4   | 5   | 3   | 8   | 8   | 14  | 13  | 96  | 8-6            | 8-6   |       |  |
| Macouville.....                       | 0800          | 17  | 18  | 10  | 11  | 6   | 9   | 8   | 9   | 7   | 12  | 12  | 11  | 125            | 2-3   | 2-3   |  |
| Mafeking.....                         | 0800          | 11  | 9   | 8   | 8   | 4   | 5   | 8   | 9   | 4   | 7   | 11  | 10  | 83             | 9-10  | 9-10  |  |
| Marnitz.....                          | 0800          | 11  | 9   | 7   | 7   | 3   | 4   | 4   | 3   | 8   | 8   | 12  | 12  | 85             | 11-12 | 10-12 |  |
| Matroosberg.....                      | 0700          | 6   | 6   | 9   | 10  | 10  | 8   | 9   | 9   | 10  | 12  | 8   | 8   | 103            | 10-11 | 10-11 |  |
| Middelburg.....                       | 0800          | 10  | 8   | 11  | 11  | 8   | 7   | 8   | 8   | 9   | 11  | 9   | 7   | 107            | 11    | 10-11 |  |
| Okiep.....                            | 0700          | 8   | 4   | 8   | 6   | 8   | 7   | 7   | 8   | 7   | 9   | 8   | 4   | 73             | 12-13 | 12-13 |  |
| Phalaborwa.....                       | 0800          | 20  | 16  | 16  | 14  | 8   | 7   | 7   | 9   | 11  | 16  | 19  | 20  | 162            | 10    | 10    |  |
| Pietersburg.....                      | 0800          | 17  | 15  | 13  | 12  | 6   | 6   | 6   | 8   | 8   | 12  | 18  | 17  | 135            | 12    | 12    |  |
| Piet Retief.....                      | 0800          | 18  | 16  | 14  | 13  | 6   | 6   | 6   | 8   | 10  | 18  | 18  | 17  | 180            | 11-12 | 11-12 |  |
| Port Elizabeth.....                   | 0800          | 18  | 13  | 15  | 14  | 11  | 9   | 11  | 11  | 12  | 16  | 14  | 13  | 155            | 12    | 12    |  |
| Port Saint Johns.....                 | 0800          | 18  | 18  | 16  | 12  | 10  | 7   | 7   | 9   | 14  | 18  | 17  | 16  | 188            | 12    | 12    |  |
| Queenstown.....                       | 0800          | 14  | 12  | 15  | 15  | 12  | 9   | 10  | 9   | 12  | 14  | 18  | 11  | 146            | 9-11  | 9-11  |  |
| Sheepston.....                        | 0800          | 17  | 14  | 16  | 15  | 10  | 8   | 8   | 7   | 10  | 17  | 16  | 14  | 182            | 8-6   | 8-6   |  |
| Uplington.....                        | 0700          | 6   | 8   | 8   | 6   | 6   | 6   | 8   | 8   | 7   | 8   | 8   | 8   | 73             | 12    | 12    |  |
| Wepener.....                          | 0800          | 9   | 9   | 10  | 9   | 8   | 8   | 6   | 6   | 7   | 10  | 10  | 8   | 100            | 12-13 | 12-13 |  |
| Willowmore.....                       | 0800          | 8   | 8   | 10  | 11  | 7   | 6   | 6   | 7   | 9   | 10  | 7   | 8   | 96             | 8-9   | 8-9   |  |
| South-West Africa:                    |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |  |
| Onkabel.....                          | 0700          | 8   | 8   | 8   | 3   | 2   | 1   | 1   | 1   | 1   | 3   | 4   | 3   | 34             | 8     | 8     |  |
| Keetmanshoop.....                     | 0700          | 4   | 8   | 4   | 3   | 4   | 3   | 3   | 3   | 4   | 8   | 4   | 3   | 47             | 9-10  | 9-10  |  |
| Mariental.....                        | 0700          | 6   | 6   | 8   | 4   | 2   | 2   | 2   | 1   | 2   | 4   | 4   | 2   | 38             | 8     | 8     |  |
| Outjo.....                            | 0700          | 6   | 7   | 6   | 3   | 2   | 1   | 1   | 2   | 2   | 2   | 4   | 3   | 38             | 8     | 8     |  |
| Windhoek.....                         | 0700          | 10  | 8   | 10  | 8   | 3   | 2   | 2   | 2   | 4   | 6   | 8   | 8   | 63             | 9-10  | 9-10  |  |
| Botswana:                             |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |  |
| Francistown.....                      | 1400          | 17  | 17  | 14  | 11  | 4   | 8   | 6   | 4   | 2   | 7   | 16  | 18  | 120            | 6     | 6     |  |
| Gaborone.....                         | 1400          | 13  | 10  | 11  | 9   | 4   | 8   | 4   | 8   | 8   | 9   | 12  | 10  | 94             | 6-7   | 6-7   |  |
| Ghanzi.....                           | 1300          | 21  | 19  | 18  | 14  | 4   | 8   | 8   | 1   | 1   | 9   | 19  | 22  | 135            | 6     | 6     |  |
| Maun.....                             | 1400          | 18  | 17  | 18  | 7   | 2   | 2   | 2   | 2   | 2   | 6   | 16  | 21  | 110            | 9     | 9     |  |
| Shakawe.....                          | 1300          | 18  | 19  | 17  | 9   | 2   | 2   | 2   | 1   | 1   | 7   | 18  | 19  | 116            | 8     | 8     |  |
| Taobong.....                          | 1300          | 8   | 6   | 8   | 4   | 2   | 3   | 3   | 1   | 2   | 4   | 7   | 6   | 54             | 6-7   | 6-7   |  |
| Tloane.....                           | 1300          | 12  | 12  | 12  | 7   | 2   | 3   | 3   | 1   | 1   | 6   | 11  | 10  | 81             | 6     | 6     |  |
| Republic of South Africa:             |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |  |
| Alexander Bay.....                    | 1300          | 3   | 2   | 2   | 4   | 6   | 8   | 8   | 6   | 4   | 8   | 3   | 3   | 48             | 12    | 12    |  |
| Beaufort West.....                    | 1400          | 7   | 6   | 10  | 11  | 11  | 8   | 7   | 7   | 10  | 10  | 9   | 7   | 102            | 11-12 | 11-12 |  |
| Bethlehem.....                        | 1400          | 13  | 9   | 10  | 10  | 8   | 8   | 2   | 4   | 7   | 12  | 13  | 12  | 101            | 10-11 | 10-11 |  |
| Calvinia.....                         | 1300          | 3   | 3   | 6   | 7   | 9   | 10  | 7   | 8   | 7   | 8   | 8   | 3   | 78             | 12    | 11-12 |  |
| Cape Agulhas.....                     | 1300          | 9   | 9   | 13  | 13  | 15  | 14  | 13  | 12  | 12  | 13  | 11  | 8   | 141            | 12    | 12    |  |
| Cape Columbine.....                   | 1300          | 8   | 8   | 8   | 10  | 12  | 12  | 10  | 11  | 9   | 9   | 7   | 6   | 103            | 12    | 12    |  |
| Cape Saint Lucia.....                 | 1400          | 12  | 10  | 8   | 9   | 6   | 7   | 6   | 8   | 10  | 14  | 18  | 12  | 117            | 11    | 10-11 |  |
| Cape Town/D.F. Malan.....             | 1300          | 8   | 6   | 7   | 10  | 15  | 13  | 13  | 13  | 11  | 10  | 8   | 6   | 118            | 11-12 | 11-12 |  |
| De Aar.....                           | 1400          | 8   | 7   | 9   | 10  | 8   | 7   | 6   | 4   | 7   | 10  | 9   | 8   | 95             | 10-11 | 10-11 |  |
| Durban/Louis Botha.....               | 1400          | 16  | 12  | 11  | 12  | 10  | 7   | 6   | 8   | 14  | 18  | 18  | 17  | 145            | 11-12 | 11-12 |  |
| East London.....                      | 1400          | 16  | 12  | 15  | 13  | 13  | 9   | 10  | 10  | 13  | 17  | 16  | 15  | 158            | 12    | 12    |  |
| Estcourt.....                         | 1400          | 10  | 7   | 6   | 8   | 8   | 4   | 3   | 4   | 6   | 10  | 13  | 11  | 89             | 11    | 11    |  |
| Johannesburg/Jan Smuts.....           | 1400          | 14  | 10  | 8   | 8   | 4   | 3   | 3   | 3   | 8   | 8   | 13  | 13  | 93             | 12    | 12    |  |
| Kimberley.....                        | 1400          | 13  | 9   | 11  | 8   | 7   | 6   | 8   | 4   | 8   | 10  | 11  | 10  | 99             | 12    | 12    |  |
| Kuruman.....                          | 1400          | 11  | 8   | 9   | 8   | 6   | 8   | 3   | 3   | 4   | 7   | 10  | 8   | 81             | 9-11  | 9-11  |  |
| Lydenburg.....                        | 1400          | 18  | 11  | 9   | 13  | 3   | 8   | 4   | 3   | 4   | 11  | 16  | 15  | 108            | 8-6   | 8-6   |  |
| Macouville.....                       | 1400          | 19  | 20  | 15  | 12  | 8   | 10  | 8   | 6   | 6   | 9   | 12  | 11  | 128            | 2-3   | 2-3   |  |
| Mafeking.....                         | 1400          | 16  | 12  | 12  | 10  | 8   | 4   | 3   | 3   | 4   | 9   | 17  | 13  | 110            | 9-10  | 9-10  |  |
| Marnitz.....                          | 1400          | 12  | 10  | 8   | 8   | 3   | 4   | 4   | 2   | 4   | 7   | 11  | 12  | 84             | 11-12 | 10-12 |  |
| Matroosberg.....                      | 1300          | 4   | 3   | 6   | 8   | 9   | 8   | 7   | 7   | 7   | 9   | 6   | 8   | 78             | 10-11 | 10-11 |  |
| Middelburg.....                       | 1400          | 9   | 7   | 11  | 9   | 9   | 7   | 7   | 6   | 8   | 11  | 10  | 9   | 102            | 11    | 10-11 |  |

Footnote at end of table.

FIGURE 39. DAYS WITH TOTAL CLOUD COVER  $\frac{1}{2}$  OR MORE (Continued)

| COUNTRY AND STATION                   | HOUR<br>(LST) |     |     |     |     |     |     |     |     |     |     |     |     | DATA BASE INFO |       |       |
|---------------------------------------|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|-------|-------|
|                                       |               | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANN            | FOR   | CYR   |
| Republic of South Africa (Continued): |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |
| Okiep.....                            | 1300          | 2   | 3   | 5   | 5   | 8   | 8   | 6   | 6   | 6   | 6   | 5   | 3   | 63             | 12-13 | 12-13 |
| Phalaborwa.....                       | 1400          | 14  | 12  | 11  | 11  | 5   | 6   | 7   | 7   | 9   | 12  | 15  | 15  | 124            | 9-10  | 9-10  |
| Pietersburg.....                      | 1400          | 16  | 15  | 11  | 11  | 5   | 5   | 4   | 4   | 5   | 9   | 17  | 16  | 116            | 12    | 12    |
| Piet Retief.....                      | 1400          | 16  | 12  | 11  | 11  | 5   | 5   | 4   | 5   | 8   | 14  | 17  | 16  | 123            | 11-12 | 11-12 |
| Port Elizabeth.....                   | 1400          | 10  | 9   | 10  | 11  | 11  | 8   | 10  | 9   | 12  | 12  | 10  | 10  | 121            | 12    | 12    |
| Port St. John's.....                  | 1400          | 15  | 12  | 13  | 11  | 10  | 6   | 7   | 9   | 12  | 18  | 16  | 15  | 143            | 12    | 12    |
| Queenstown.....                       | 1400          | 15  | 10  | 11  | 10  | 10  | 7   | 7   | 6   | 9   | 13  | 13  | 11  | 120            | 9-11  | 9-11  |
| Sheepcrun.....                        | 1400          | 17  | 10  | 14  | 12  | 8   | 9   | 6   | 6   | 8   | 15  | 14  | 14  | 120            | 5-6   | 5-6   |
| Uptington.....                        | 1300          | 5   | 7   | 9   | 7   | 8   | 5   | 4   | 4   | 5   | 7   | 8   | 6   | 78             | 12    | 12    |
| Walvis Bay.....                       | 1300          | 13  | 15  | 15  | 11  | 12  | 7   | 8   | 13  | 14  | 14  | 12  | 15  | 147            | 7-8   | 8-8   |
| Wepener.....                          | 1400          | 15  | 14  | 14  | 12  | 10  | 8   | 7   | 6   | 8   | 13  | 15  | 13  | 137            | 12-13 | 12-13 |
| Willowmore.....                       | 1400          | 3   | 3   | 5   | 5   | 5   | 4   | 4   | 5   | 4   | 5   | 5   | 3   | 51             | 8-9   | 7-9   |
| South-West Africa:                    |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |
| Gobabis.....                          | 1300          | 7   | 6   | 5   | 4   | 1   | 1   | 1   | 1   | 2   | 3   | 5   | 3   | 41             | 8     | 8     |
| Keetmanshoop.....                     | 1300          | 6   | 6   | 4   | 4   | 4   | 3   | 3   | 2   | 3   | 5   | 5   | 5   | 50             | 9-10  | 9-10  |
| Mariental.....                        | 1300          | 6   | 5   | 5   | 4   | 1   | 2   | 1   | 1   | 2   | 4   | 7   | 3   | 40             | 8     | 8     |
| Outjo.....                            | 1300          | 7   | 7   | 7   | 4   | 1   | 1   | 1   | 1   | 1   | 2   | 5   | 3   | 38             | 8     | 8     |
| Windhoek.....                         | 1300          | 15  | 14  | 15  | 5   | 3   | 2   | 1   | 2   | 4   | 7   | 14  | 14  | 100            | 9-10  | 9-10  |
| Botswana:                             |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |
| Francistown.....                      | 3000          | 12  | 8   | 7   | 6   | 1   | 2   | 2   | 1   | 2   | 5   | 11  | 13  | 59             | 6     | 6     |
| Gaborone.....                         | 3000          | 13  | 8   | 8   | 5   | 3   | 3   | 3   | 1   | 2   | 7   | 10  | 10  | 72             | 6-7   | 6-7   |
| Ghanzi.....                           | 1900          | 15  | 10  | 3   | 7   | 2   | 2   | 3   | 1   | 1   | 7   | 14  | 12  | 50             | 5-6   | 5-6   |
| Maur.....                             | 2000          | 14  | 14  | 11  | 6   | 1   | 2   | 2   | 1   | 2   | 6   | 12  | 15  | 55             | 9     | 8-9   |
| Shakawe.....                          | 1900          | 15  | 13  | 9   | 5   | 2   | 1   | 1   | 1   | 1   | 4   | 11  | 12  | 77             | 5     | 5     |
| Tlokweng.....                         | 1900          | 8   | 6   | 7   | 2   | 2   | 3   | 3   | 1   | 3   | 8   | 6   | 7   | 55             | 6-7   | 6-7   |
| Tsane.....                            | 1900          | 12  | 8   | 7   | 5   | 2   | 2   | 2   | 1   | 1   | 5   | 10  | 7   | 51             | 6     | 6     |
| Republic of South Africa:             |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |
| Alexander Bay.....                    | 1900          | 8   | 9   | 8   | 7   | 5   | 6   | 7   | 5   | 8   | 9   | 7   | 10  | 92             | 10-11 | 10-11 |
| Beaufort West.....                    | 2000          | 8   | 5   | 5   | 7   | 7   | 6   | 4   | 5   | 6   | 6   | 5   | 7   | 77             | 11-12 | 10-12 |
| Bethlehem.....                        | 2000          | 13  | 8   | 9   | 5   | 3   | 3   | 1   | 1   | 4   | 8   | 11  | 11  | 77             | 10-11 | 10-11 |
| Calvinia.....                         | 1900          | 2   | 3   | 4   | 5   | 6   | 6   | 4   | 5   | 4   | 5   | 4   | 3   | 53             | 11-12 | 10-12 |
| Cape Agulhas.....                     | 1900          | 13  | 13  | 10  | 11  | 12  | 10  | 11  | 10  | 11  | 12  | 12  | 13  | 141            | 12    | 11-12 |
| Cape Columbine.....                   | 1900          | 5   | 5   | 8   | 7   | 10  | 10  | 8   | 9   | 7   | 8   | 6   | 6   | 89             | 12    | 12    |
| Cape Saint Lucia.....                 | 2000          | 16  | 11  | 9   | 9   | 5   | 5   | 5   | 6   | 11  | 16  | 19  | 17  | 129            | 11    | 10-11 |
| Cape Town/D.F. Malan.....             | 1900          | 5   | 5   | 7   | 5   | 11  | 11  | 10  | 11  | 5   | 9   | 7   | 7   | 97             | 11-12 | 11-12 |
| P. A. A. A.....                       | 2000          | 9   | 6   | 7   | 5   | 5   | 4   | 2   | 2   | 5   | 6   | 8   | 7   | 64             | 10-11 | 10-11 |
| Durban/Louis Botha.....               | 2000          | 24  | 19  | 21  | 16  | 11  | 8   | 9   | 12  | 17  | 23  | 25  | 25  | 209            | 11-12 | 11-12 |
| East London.....                      | 2000          | 21  | 14  | 15  | 12  | 10  | 7   | 7   | 8   | 12  | 17  | 15  | 17  | 160            | 11-12 | 10-12 |
| Katsoot.....                          | 2000          | 20  | 15  | 14  | 10  | 6   | 4   | 3   | 4   | 9   | 15  | 15  | 20  | 135            | 11    | 11    |
| Johannesburg/Jon Smuts.....           | 2000          | 13  | 9   | 8   | 6   | 2   | 3   | 3   | 2   | 5   | 9   | 12  | 13  | 84             | 12    | 12    |
| Kimberley.....                        | 2000          | 13  | 8   | 10  | 7   | 5   | 4   | 3   | 2   | 5   | 8   | 10  | 10  | 84             | 12    | 12    |
| Kuruman.....                          | 2000          | 11  | 7   | 7   | 4   | 3   | 3   | 2   | 1   | 2   | 4   | 5   | 10  | 60             | 9-11  | 9-11  |
| Lydenburg.....                        | 2000          | 14  | 11  | 7   | 9   | 3   | 4   | 2   | 3   | 3   | 10  | 17  | 13  | 95             | 5-6   | 5-6   |
| Macouville.....                       | 2000          | 12  | 10  | 5   | 6   | 2   | 5   | 4   | 4   | 4   | 7   | 8   | 6   | 72             | 9-3   | 9-3   |
| Mafeking.....                         | 2000          | 12  | 10  | 7   | 7   | 3   | 3   | 2   | 1   | 2   | 7   | 10  | 11  | 74             | 9-10  | 9-10  |
| Marnitz.....                          | 2000          | 8   | 6   | 4   | 5   | 2   | 3   | 2   | 1   | 3   | 6   | 7   | 9   | 55             | 11-12 | 10-12 |
| Matroosberg.....                      | 1900          | 4   | 2   | 5   | 5   | 5   | 5   | 5   | 4   | 4   | 7   | 5   | 3   | 55             | 10-11 | 10-11 |
| Middelburg.....                       | 2000          | 9   | 5   | 9   | 7   | 7   | 5   | 4   | 3   | 5   | 6   | 7   | 8   | 76             | 10-11 | 10-11 |
| Okiep.....                            | 1900          | 2   | 3   | 4   | 3   | 5   | 5   | 5   | 5   | 4   | 5   | 3   | 3   | 47             | 12-13 | 12-13 |
| Phalaborwa.....                       | 2000          | 10  | 8   | 6   | 7   | 2   | 3   | 3   | 3   | 4   | 8   | 11  | 12  | 77             | 9-10  | 9-10  |
| Pietersburg.....                      | 2000          | 9   | 7   | 5   | 5   | 2   | 3   | 2   | 2   | 3   | 8   | 11  | 11  | 68             | 12    | 12    |
| Piet Retief.....                      | 2030          | 16  | 12  | 10  | 9   | 4   | 4   | 4   | 4   | 9   | 15  | 19  | 17  | 124            | 11-12 | 11-12 |
| Port Elizabeth.....                   | 2000          | 15  | 12  | 14  | 11  | 9   | 6   | 7   | 9   | 11  | 14  | 15  | 14  | 135            | 12    | 12    |
| Port Saint John's.....                | 2000          | 22  | 15  | 15  | 11  | 8   | 6   | 7   | 9   | 14  | 19  | 21  | 22  | 174            | 12    | 11-12 |
| Queenstown.....                       | 2000          | 16  | 14  | 14  | 9   | 7   | 5   | 5   | 5   | 7   | 12  | 14  | 13  | 122            | 8-9   | 8-9   |
| Sheepcrun.....                        | 2000          | 21  | 17  | 15  | 13  | 7   | 6   | 6   | 5   | 10  | 17  | 19  | 20  | 155            | 5-6   | 5-6   |
| Uptington.....                        | 1900          | 5   | 6   | 7   | 4   | 5   | 3   | 2   | 2   | 4   | 5   | 7   | 6   | 58             | 12    | 12    |
| Wepener.....                          | 2000          | 14  | 10  | 11  | 8   | 4   | 4   | 4   | 3   | 4   | 8   | 11  | 11  | 93             | 12-13 | 12-13 |
| Willowmore.....                       | 2000          | 5   | 3   | 7   | 5   | 4   | 3   | 4   | 3   | 5   | 6   | 5   | 4   | 54             | 8-9   | 7-9   |

Footnote at end of table.

FIGURE 39. DAYS WITH TOTAL CLOUD COVER  $\frac{1}{2}$  OR MORE (Continued)

| COUNTRY AND STATION | HOUR<br>(LST) |     |     |     |     |     |     |     |     |     |     |     |     | DATA BASE INFO |      |      |
|---------------------|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|------|------|
|                     |               | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANN            | FOR  | CYR  |
| South-West Africa:  |               |     |     |     |     |     |     |     |     |     |     |     |     |                |      |      |
| Gobabis.....        | 1900          | 9   | 7   | 6   | 5   | 2   | 1   | *   | 1   | 1   | 3   | 8   | 6   | 48             | 8    | 8    |
| Keetmanshoop.....   | 1900          | 9   | 7   | 6   | 4   | 2   | 2   | 2   | 1   | 3   | 6   | 6   | 6   | 53             | 9-10 | 9-10 |
| Mariental.....      | 1900          | 9   | 8   | 7   | 4   | 1   | 2   | 1   | 1   | 2   | 5   | 7   | 5   | 50             | 8    | 8    |
| Outjo.....          | 1900          | 11  | 9   | 7   | 4   | *   | *   | 1   | 1   | 1   | 2   | 7   | 5   | 47             | 8    | 8    |
| Windhoek.....       | 1900          | 17  | 13  | 15  | 8   | 3   | 2   | 2   | 2   | 4   | 6   | 12  | 12  | 95             | 8    | 8    |

\* &lt; 0.5 day.

FIGURE 40. PERCENTAGE FREQUENCY OF CEILING < 3,000 FEET AT SPECIFIED HOURS  
(Ceiling defined as  $\frac{1}{2}$  or more cloud cover)

| COUNTRY AND STATION         | HOUR<br>(LST) |     |     |     |     |     |     |     |     |     |     |     |     | DATA BASE INFO |       |       |
|-----------------------------|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|-------|-------|
|                             |               | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANN            | FOR   | CYR   |
| Botswana:                   |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |
| Francistown.....            | 0800          | 24  | 29  | 19  | 19  | 9   | 11  | 6   | 9   | 8   | 15  | 14  | 26  | 15             | 6     | 6     |
| Gaborone.....               | 0800          | 14  | 15  | 8   | 13  | 4   | 2   | 1   | 1   | 6   | 11  | 13  | 13  | 8              | 7     | 6-7   |
| Ghanzi.....                 | 0700          | 10  | 11  | 11  | 7   | 2   | 3   | 1   | 0   | 0   | 4   | 9   | 14  | 6              | 6     | 6     |
| Maun.....                   | 0800          | 11  | 9   | 7   | 1   | 0   | *   | 0   | 0   | 0   | *   | 6   | 13  | 4              | 9     | 9     |
| Shakawe.....                | 0700          | 4   | 9   | 4   | 5   | 1   | 0   | 0   | 0   | 0   | 1   | 7   | 15  | 4              | 5     | 5     |
| Tlokweng.....               | 0700          | 4   | 8   | 3   | 4   | 3   | 1   | 1   | 1   | 1   | 1   | 4   | 4   | 2              | 6-7   | 6-7   |
| Tsane.....                  | 0700          | 6   | 6   | 6   | 8   | 2   | 4   | 3   | 1   | 0   | 3   | 6   | 8   | 4              | 6     | 6     |
| Republic of South Africa:   |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |
| Alexander Bay.....          | 0700          | 50  | 52  | 52  | 30  | 32  | 28  | 34  | 32  | 40  | 38  | 40  | 48  | 40             | 12    | 12    |
| Beaufort West.....          | 0800          | 21  | 20  | 26  | 20  | 12  | 9   | 8   | 10  | 18  | 20  | 19  | 13  | 16             | 11-12 | 11-12 |
| Bethlehem.....              | 0800          | 22  | 25  | 23  | 23  | 15  | 12  | 11  | 10  | 12  | 13  | 22  | 17  | 17             | 10-11 | 10-11 |
| Calvinia.....               | 0700          | 6   | 9   | 10  | 16  | 21  | 21  | 15  | 20  | 16  | 16  | 9   | 4   | 14             | 12    | 12    |
| Cape Agulhas.....           | 0700          | 43  | 49  | 52  | 49  | 33  | 31  | 35  | 37  | 41  | 44  | 41  | 41  | 41             | 12    | 12    |
| Cape Colony.....            | 0700          | 29  | 33  | 34  | 34  | 37  | 37  | 33  | 34  | 37  | 33  | 30  | 29  | 33             | 12    | 12    |
| Cape Saint Lucia.....       | 0800          | 23  | 30  | 25  | 22  | 15  | 14  | 13  | 18  | 28  | 31  | 38  | 31  | 25             | 11    | 11    |
| Cape Town/D.F. Malan.....   | 0700          | 18  | 22  | 23  | 24  | 31  | 35  | 30  | 32  | 32  | 29  | 25  | 19  | 27             | 11-12 | 11-12 |
| De Aar.....                 | 0800          | 1   | 1   | 1   | 5   | 5   | 5   | 4   | 4   | 2   | 4   | 2   | 1   | 3              | 10-11 | 10-11 |
| Durban/Louis Botha.....     | 0530          | 21  | 21  | 19  | 18  | 8   | 9   | 9   | 11  | 23  | 27  | 33  | 29  | 20             | 11-12 | 11-12 |
| East London.....            | 0800          | 39  | 33  | 34  | 25  | 16  | 10  | 15  | 20  | 26  | 28  | 35  | 35  | 26             | 12    | 12    |
| Katourie.....               | 0800          | 26  | 30  | 24  | 23  | 12  | 6   | 8   | 12  | 15  | 23  | 27  | 30  | 20             | 11    | 11    |
| Johannesburg/Jan Smuts..... | 0800          | 26  | 23  | 19  | 20  | 9   | 6   | 9   | 2   | 13  | 15  | 23  | 25  | 16             | 12    | 12    |
| Kimberley.....              | 0800          | 4   | 2   | 4   | 4   | 4   | 5   | 2   | 4   | 3   | 2   | 4   | 2   | 3              | 12    | 12    |
| Kuruman.....                | 0800          | 9   | 7   | 11  | 10  | 4   | 5   | 5   | 4   | 5   | 9   | 9   | 6   | 7              | 9-11  | 9-11  |
| Lydenburg.....              | 0800          | 35  | 29  | 23  | 23  | 12  | 11  | 9   | 10  | 13  | 15  | 31  | 27  | 20             | 5-6   | 5-6   |
| Macosville.....             | 0800          | 47  | 46  | 31  | 28  | 11  | 15  | 15  | 25  | 15  | 35  | 31  | 29  | 22             | 2-3   | 2-3   |
| Mafeking.....               | 0800          | 0   | 11  | 8   | 10  | 3   | 3   | 1   | 1   | 2   | 7   | 9   | 10  | 6              | 9-10  | 9-10  |
| Marrisa.....                | 0800          | 23  | 20  | 12  | 17  | 8   | 12  | 10  | 8   | 11  | 15  | 20  | 23  | 15             | 11-12 | 10-12 |
| Matroosberg.....            | 0700          | 15  | 16  | 24  | 20  | 19  | 15  | 15  | 21  | 20  | 24  | 17  | 11  | 15             | 10-11 | 10-11 |
| Middelburg.....             | 0800          | 24  | 19  | 22  | 21  | 12  | 10  | 10  | 11  | 15  | 16  | 21  | 14  | 16             | 11    | 10-11 |
| Okiep.....                  | 0700          | 7   | 5   | 9   | 11  | 15  | 17  | 15  | 19  | 14  | 16  | 8   | 7   | 12             | 12-13 | 12-13 |
| Phalaborwa.....             | 0800          | 52  | 50  | 42  | 42  | 23  | 17  | 15  | 24  | 33  | 37  | 47  | 45  | 35             | 9-10  | 9-10  |
| Pietersburg.....            | 0800          | 38  | 42  | 34  | 31  | 13  | 15  | 13  | 14  | 20  | 25  | 35  | 33  | 26             | 12    | 12    |
| Piet Retief.....            | 0800          | 52  | 55  | 45  | 40  | 23  | 20  | 15  | 22  | 32  | 45  | 55  | 54  | 39             | 10-12 | 10-12 |
| Port Elizabeth.....         | 0800          | 30  | 26  | 27  | 19  | 13  | 8   | 15  | 13  | 20  | 27  | 27  | 27  | 21             | 12    | 12    |
| Port Saint John.....        | 0800          | 35  | 35  | 28  | 22  | 12  | 12  | 14  | 17  | 29  | 35  | 32  | 29  | 25             | 12    | 12    |
| Queenstown.....             | 0800          | 30  | 35  | 37  | 29  | 19  | 13  | 11  | 15  | 24  | 29  | 31  | 24  | 25             | 9-11  | 9-11  |
| Sheeprun.....               | 0800          | 40  | 44  | 39  | 37  | 17  | 19  | 15  | 20  | 29  | 43  | 43  | 35  | 32             | 5-6   | 5-6   |
| Uppington.....              | 0700          | 1   | 1   | 2   | 3   | 5   | 7   | 5   | 5   | 2   | 4   | 2   | 2   | 3              | 12    | 12    |
| Wopener.....                | 0800          | 4   | 7   | 7   | 8   | 8   | 5   | 3   | 2   | 2   | 3   | 6   | 4   | 5              | 12-13 | 12-13 |
| Willowmore.....             | 0800          | 20  | 25  | 29  | 29  | 10  | 14  | 13  | 18  | 24  | 27  | 21  | 13  | 21             | 8-9   | 8-9   |
| South-West Africa:          |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |
| Gobabis.....                | 0700          | 4   | 4   | 7   | 5   | 1   | 1   | *   | 0   | 0   | 1   | 0   | 3   | 3              | 8     | 8     |
| Keetmanshoop.....           | 0700          | 1   | 0   | 1   | 2   | 3   | 3   | 1   | 3   | 2   | *   | 1   | *   | 1              | 9-10  | 9-10  |
| Mariental.....              | 0700          | 0   | 1   | *   | 1   | 1   | *   | 0   | 0   | 0   | *   | *   | 0   | *              | 8     | 8     |
| Outjo.....                  | 0700          | 3   | 4   | 2   | *   | *   | 0   | 1   | 0   | 1   | *   | 0   | *   | 1              | 8     | 8     |
| Windhoek.....               | 0700          | 4   | 4   | 4   | 3   | 1   | 1   | 1   | *   | 1   | 0   | 1   | 1   | 2              | 9-10  | 9-10  |

Footnote at end of table.



FIGURE 40. FREQUENCY OF CEILING &lt;3,300 FEET (Continued)

| COUNTRY AND STATION         | HOUR<br>(LST) |     |     |     |     |     |     |     |     |     |     |     |     | DATA BASE INFO |       |       |
|-----------------------------|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|-------|-------|
|                             |               | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANN            | FOR   | CYR   |
| Botswana:                   |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |
| Francistown.....            | 1400          | 26  | 34  | 27  | 26  | 8   | 7   | 7   | 5   | 2   | 11  | 23  | 35  | 18             | 6     | 6     |
| Gaborones.....              | 1400          | 16  | 10  | 14  | 11  | 3   | 3   | 4   | 2   | 3   | 10  | 13  | 15  | 9              | 6-7   | 5-7   |
| Ghanzi.....                 | 1300          | 27  | 29  | 31  | 13  | 4   | 3   | 5   | 1   | 1   | 11  | 20  | 43  | 16             | 6     | 6     |
| Maun.....                   | 1400          | 19  | 20  | 12  | 5   | *   | 0   | *   | 0   | 0   | 1   | 8   | 21  | 7              | 9     | 8-9   |
| Shakawe.....                | 1300          | 6   | 9   | 8   | 4   | 1   | 1   | 0   | 0   | 1   | 0   | 3   | 14  | 4              | 5     | 5     |
| Tsabong.....                | 1300          | 8   | 8   | 7   | 0   | 4   | 2   | 2   | *   | 0   | 1   | 4   | 8   | 4              | 6-7   | 6-7   |
| Tsane.....                  | 1300          | 11  | 11  | 11  | 7   | 3   | 5   | 1   | 1   | 0   | 3   | 8   | 5   | 6              | 6     | 6     |
| Republic of South Africa:   |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |
| Alexander Bay.....          | 1300          | 8   | 4   | 3   | 7   | 6   | 9   | 10  | 13  | 8   | 7   | 4   | 7   | 7              | 12    | 12    |
| Beaufort West.....          | 1400          | 7   | 4   | 7   | 8   | 8   | 8   | 6   | 7   | 7   | 8   | 8   | 4   | 7              | 11-12 | 11-12 |
| Bethlehem.....              | 1400          | 9   | 12  | 7   | 11  | 5   | 4   | 3   | 2   | 9   | 11  | 13  | 14  | 8              | 10-11 | 10-11 |
| Calvinia.....               | 1300          | 1   | 4   | 3   | 10  | 13  | 15  | 11  | 12  | 6   | 7   | 4   | 2   | 7              | 12    | 11-12 |
| Cape Agulhas.....           | 1300          | 18  | 25  | 30  | 28  | 27  | 29  | 20  | 29  | 25  | 27  | 22  | 16  | 25             | 12    | 12    |
| Cape Columbine.....         | 1300          | 12  | 16  | 17  | 24  | 26  | 31  | 29  | 28  | 21  | 21  | 15  | 12  | 21             | 12    | 12    |
| Cape Saint Lucia.....       | 1400          | 23  | 20  | 18  | 15  | 12  | 13  | 12  | 14  | 21  | 25  | 27  | 17  | 18             | 11    | 10-11 |
| Cape Town/D.F. Malan.....   | 1300          | 7   | 11  | 9   | 10  | 24  | 26  | 30  | 29  | 21  | 12  | 9   | 10  | 17             | 11-12 | 11-12 |
| De Aar.....                 | 1400          | 2   | 1   | 2   | 2   | 3   | 5   | 3   | 4   | 3   | 4   | 3   | 4   | 3              | 10-11 | 10-11 |
| Durban/Louis Botha.....     | 1400          | 30  | 21  | 16  | 16  | 9   | 7   | 7   | 12  | 24  | 30  | 34  | 28  | 20             | 11-12 | 11-12 |
| East London.....            | 1400          | 35  | 31  | 27  | 21  | 12  | 7   | 9   | 15  | 25  | 31  | 34  | 30  | 23             | 12    | 12    |
| Estecourt.....              | 1400          | 11  | 10  | 4   | 7   | 2   | 3   | 2   | 3   | 8   | 16  | 10  | 7   | 6              | 11    | 11    |
| Johannesburg/Jan Smuts..... | 1400          | 15  | 16  | 11  | 11  | 4   | 4   | 3   | 3   | 6   | 9   | 13  | 17  | 9              | 12    | 12    |
| Kimberley.....              | 1400          | 2   | 4   | 5   | 6   | 5   | 5   | 3   | 3   | 2   | 1   | 5   | 1   | 3              | 12    | 12    |
| Kuruman.....                | 1400          | 7   | 6   | 9   | 8   | 4   | 4   | 3   | 1   | 2   | 9   | 10  | 8   | 6              | 9-11  | 9-11  |
| Lydenburg.....              | 1400          | 46  | 35  | 34  | 41  | 10  | 14  | 12  | 8   | 11  | 24  | 45  | 36  | 26             | 5-6   | 5-6   |
| Macouville.....             | 1400          | 45  | 32  | 37  | 28  | 10  | 25  | 16  | 15  | 26  | 21  | 36  | 26  | 26             | 2-3   | 2-3   |
| Mafeking.....               | 1400          | 20  | 20  | 16  | 16  | 6   | 6   | 2   | 3   | 3   | 8   | 16  | 17  | 11             | 9-10  | 9-10  |
| Mamita.....                 | 1400          | 18  | 16  | 10  | 13  | 6   | 10  | 9   | 5   | 8   | 9   | 11  | 14  | 11             | 11-12 | 10-11 |
| Matroosberg.....            | 1300          | 4   | 4   | 8   | 10  | 16  | 12  | 11  | 11  | 8   | 9   | 5   | 4   | 9              | 10-11 | 10-11 |
| Middelburg.....             | 1400          | 11  | 11  | 12  | 11  | 8   | 8   | 7   | 9   | 5   | 9   | 9   | 7   | 9              | 11    | 10-11 |
| Okiep.....                  | 1300          | 5   | 5   | 7   | 9   | 14  | 21  | 15  | 15  | 11  | 10  | 6   | 3   | 10             | 12-13 | 12-13 |
| Phalaborwa.....             | 1400          | 20  | 24  | 12  | 16  | 8   | 7   | 6   | 9   | 10  | 17  | 21  | 21  | 14             | 9-10  | 9-10  |
| Pieteraburg.....            | 1400          | 28  | 30  | 21  | 22  | 10  | 11  | 7   | 9   | 9   | 11  | 24  | 24  | 17             | 12    | 12    |
| Piet Retief.....            | 1400          | 44  | 38  | 27  | 31  | 12  | 14  | 9   | 17  | 22  | 38  | 52  | 39  | 29             | 10-11 | 9-11  |
| Port Elizabeth.....         | 1400          | 20  | 20  | 14  | 14  | 11  | 9   | 11  | 9   | 14  | 16  | 13  | 13  | 14             | 12    | 12    |
| Port Saint Johns.....       | 1400          | 30  | 28  | 26  | 22  | 14  | 8   | 11  | 14  | 27  | 36  | 31  | 30  | 23             | 12    | 12    |
| Queenstown.....             | 1400          | 15  | 10  | 14  | 14  | 9   | 6   | 4   | 3   | 7   | 10  | 13  | 9   | 10             | 9-11  | 8-11  |
| Sheepston.....              | 1400          | 29  | 26  | 32  | 23  | 12  | 17  | 10  | 12  | 14  | 34  | 38  | 30  | 23             | 5-6   | 5-6   |
| Uppington.....              | 1300          | *   | 1   | 1   | 3   | 4   | 5   | 2   | 2   | 3   | 1   | 1   | *   | 2              | 12    | 12    |
| Walvis Bay.....             | 1300          | 41  | 43  | 44  | 31  | 42  | 24  | 21  | 41  | 44  | 40  | 35  | 45  | 38             | 7-8   | 5-6   |
| Wepener.....                | 1400          | 2   | 4   | 4   | 3   | 2   | 1   | 1   | 1   | 1   | 1   | 4   | 1   | 2              | 12-13 | 12-13 |
| Willowmore.....             | 1400          | 6   | 6   | 9   | 14  | 9   | 8   | 8   | 11  | 7   | 10  | 8   | 2   | 8              | 8-9   | 7-9   |
| South-West Africa:          |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |
| Gibbala.....                | 1300          | 4   | 2   | 2   | 3   | *   | *   | 0   | *   | *   | 0   | 4   | 2   | 2              | 8     | 8     |
| Keetmanshoop.....           | 1300          | 0   | 1   | 1   | 1   | 2   | 5   | 2   | 1   | 1   | 1   | 0   | *   | 1              | 9-10  | 9-10  |
| Mariental.....              | 1300          | 1   | *   | 1   | 2   | *   | 0   | 0   | *   | 0   | 0   | 0   | 0   | *              | 8     | 7-8   |
| Outjo.....                  | 1300          | 2   | 4   | 4   | 2   | 0   | 0   | 0   | 0   | 0   | 0   | *   | *   | 1              | 8     | 8     |
| Windhoek.....               | 1300          | 6   | 4   | 5   | 7   | 2   | 1   | *   | 0   | 0   | 1   | 2   | 1   | 2              | 9-10  | 9-10  |
| Botswana:                   |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |
| Francistown.....            | 2000          | 11  | 11  | 9   | 6   | 1   | 3   | 1   | 2   | 2   | 7   | 13  | 13  | 7              | 6     | 6     |
| Gaborones.....              | 2000          | 7   | 7   | 5   | 4   | 0   | 2   | 1   | 0   | 2   | 8   | 6   | 6   | 4              | 6-7   | 6-7   |
| Ghanzi.....                 | 1900          | 20  | 13  | 14  | 9   | 3   | 2   | 2   | 0   | 1   | 9   | 24  | 23  | 10             | 5-6   | 5-6   |
| Maun.....                   | 2000          | 4   | 4   | 5   | 1   | 0   | 0   | 0   | 0   | 0   | *   | 5   | 8   | 2              | 9     | 8-9   |
| Shakawe.....                | 1900          | 6   | 11  | 2   | 4   | 1   | 0   | 0   | 0   | 1   | 1   | 2   | 6   | 3              | 5     | 5     |
| Tsabong.....                | 1900          | 5   | 4   | 6   | *   | 2   | *   | 1   | 0   | 0   | 0   | 4   | 7   | 2              | 6-7   | 6-7   |
| Tsane.....                  | 1900          | 8   | 5   | 7   | 4   | 1   | 1   | 2   | 1   | 0   | 4   | 12  | 4   | 4              | 6     | 6     |
| Republic of South Africa:   |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |
| Alexander Bay.....          | 1900          | 25  | 27  | 21  | 19  | 17  | 15  | 16  | 12  | 18  | 21  | 22  | 30  | 20             | 10-11 | 10-11 |
| Beaufort West.....          | 2000          | 6   | 3   | 0   | 5   | 0   | 0   | 4   | 5   | 5   | 7   | 7   | 6   | 5              | 11-12 | 10-12 |
| Bethlehem.....              | 2000          | 6   | 9   | 7   | 7   | 3   | 3   | 2   | 1   | 4   | 7   | 9   | 8   | 6              | 10-11 | 10-11 |
| Calvinia.....               | 1900          | *   | 2   | 2   | 8   | 11  | 12  | 7   | 11  | 5   | 7   | 3   | 1   | 6              | 11-12 | 10-12 |
| Cape Agulhas.....           | 1900          | 35  | 39  | 42  | 30  | 29  | 24  | 28  | 25  | 31  | 32  | 31  | 32  | 31             | 12    | 11-12 |
| Cape Columbine.....         | 1900          | 10  | 17  | 19  | 19  | 26  | 27  | 20  | 22  | 20  | 18  | 11  | 12  | 19             | 12    | 11-12 |

Footnote at end of table.

FIGURE 40. FREQUENCY OF CEILING &lt;3,300 FEET (Continued)

|                                       |               | DATA BASE INFO |     |     |     |     |     |     |     |     |     |     |     |     |       |       |
|---------------------------------------|---------------|----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|-------|
| COUNTRY AND STATION                   | HOUR<br>(LST) | JAN            | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANN | FOR   | CYR   |
|                                       |               |                |     |     |     |     |     |     |     |     |     |     |     |     |       |       |
| Republic of South Africa (Continued): |               |                |     |     |     |     |     |     |     |     |     |     |     |     |       |       |
| Cape Saint Lucia.....                 | 2000          | 29             | 28  | 22  | 24  | 11  | 11  | 11  | 15  | 25  | 35  | 42  | 34  | 24  | 11    | 10-11 |
| Cape Town/D.F. Malan.....             | 1900          | 11             | 10  | 14  | 15  | 24  | 27  | 23  | 23  | 17  | 15  | 12  | 12  | 17  | 11-12 | 11-12 |
| De Aar.....                           | 2000          | 3              | 2   | 2   | 1   | 1   | 2   | 1   | 1   | 1   | 1   | 2   | 3   | 2   | 10-11 | 10-11 |
| Durban/Louis Botha.....               | 2000          | 50             | 40  | 42  | 34  | 21  | 13  | 20  | 24  | 37  | 45  | 53  | 45  | 30  | 11-12 | 11-12 |
| East London.....                      | 2000          | 51             | 39  | 39  | 23  | 13  | 11  | 10  | 14  | 26  | 34  | 38  | 40  | 28  | 11-12 | 10-12 |
| Estcourt.....                         | 2000          | 16             | 15  | 13  | 11  | 4   | 2   | 2   | 5   | 11  | 19  | 21  | 20  | 12  | 11    | 11    |
| Johannesburg/Jan Smuts.....           | 2000          | 5              | 3   | 3   | 6   | 1   | 2   | 1   | 1   | 4   | 6   | 6   | 6   | 4   | 12    | 12    |
| Kimberley.....                        | 2000          | 1              | 2   | 2   | 3   | 2   | 3   | 1   | *   | 1   | 1   | 4   | 1   | 2   | 12    | 12    |
| Kuruman.....                          | 2000          | 7              | 5   | 8   | 4   | 3   | 2   | 1   | 1   | 2   | 6   | 9   | 12  | 5   | 9-11  | 9-11  |
| Lydenburg.....                        | 2000          | 38             | 34  | 19  | 25  | 8   | 7   | 8   | 8   | 8   | 23  | 39  | 32  | 21  | 5-6   | 5-6   |
| Macquarie.....                        | 2000          | 16             | 21  | 11  | 13  | 0   | 10  | 10  | 8   | 10  | 16  | 18  | 11  | 12  | 2-3   | 2-3   |
| Mafeking.....                         | 2000          | 11             | 9   | 5   | 5   | 2   | 1   | *   | 0   | 2   | 6   | 8   | 8   | 5   | 9-10  | 9-10  |
| Marrits.....                          | 2000          | 11             | 9   | 3   | 9   | 4   | 8   | 6   | 4   | 7   | 8   | 7   | 12  | 7   | 11-12 | 10-12 |
| Matroosberg.....                      | 1900          | 7              | 3   | 9   | 8   | 9   | 11  | 7   | 6   | 6   | 11  | 5   | 6   | 7   | 10-11 | 10-11 |
| Middelburg.....                       | 2000          | 14             | 12  | 13  | 12  | 8   | 0   | 5   | 4   | 4   | 7   | 10  | 11  | 9   | 10-11 | 10-11 |
| Okiep.....                            | 1900          | 3              | 4   | 5   | 7   | 10  | 13  | 12  | 14  | 8   | 10  | 5   | 3   | 5   | 12-13 | 12-13 |
| Phalaborwa.....                       | 2000          | 22             | 20  | 14  | 16  | 5   | 6   | 6   | 6   | 9   | 16  | 24  | 28  | 15  | 9-10  | 9-10  |
| Pietersburg.....                      | 2000          | 8              | 9   | 9   | 7   | 3   | 5   | 2   | 3   | 3   | 11  | 12  | 13  | 7   | 12    | 11-12 |
| Piet Retief.....                      | 2000          | 44             | 39  | 29  | 30  | 11  | 12  | 11  | 12  | 26  | 43  | 55  | 48  | 30  | 10-12 | 10-11 |
| Port Elizabeth.....                   | 2000          | 32             | 26  | 25  | 21  | 14  | 11  | 12  | 17  | 25  | 27  | 31  | 25  | 22  | 12    | 12    |
| Port Saint Johns.....                 | 2000          | 51             | 49  | 43  | 30  | 16  | 11  | 14  | 21  | 37  | 45  | 45  | 47  | 34  | 12    | 10-12 |
| Queenstown.....                       | 2000          | 30             | 32  | 25  | 15  | 10  | 4   | 5   | 3   | 10  | 20  | 29  | 21  | 17  | 8-9   | 8-9   |
| Sheepun.....                          | 2000          | 53             | 49  | 36  | 35  | 15  | 17  | 17  | 14  | 27  | 45  | 53  | 51  | 35  | 5-6   | 5-6   |
| Uppington.....                        | 1900          | *              | *   | *   | 1   | 1   | 1   | 1   | 0   | *   | *   | *   | *   | *   | 12    | 12    |
| Wepener.....                          | 2000          | 3              | 5   | 4   | 4   | 1   | 2   | 1   | 1   | 1   | 2   | 5   | 3   | 3   | 12-13 | 12-13 |
| Willowmore.....                       | 2000          | 9              | 6   | 14  | 10  | 8   | 6   | 7   | 7   | 6   | 11  | 9   | 6   | 8   | 8-9   | 7-9   |
| South-West Africa:                    |               |                |     |     |     |     |     |     |     |     |     |     |     |     |       |       |
| Gobabis.....                          | 1900          | 8              | 7   | 8   | 8   | *   | 1   | *   | 1   | 1   | 3   | 10  | 2   | 4   | 8     | 8     |
| Keetmanshoop.....                     | 1900          | *              | 2   | 1   | 1   | 1   | *   | 1   | 1   | *   | 1   | 1   | *   | 1   | 9-10  | 9-10  |
| Mariental.....                        | 1900          | 3              | 1   | 3   | 3   | *   | 0   | 0   | 0   | *   | 1   | 3   | 1   | 1   | 8     | 7-8   |
| Outjo.....                            | 1900          | 3              | 4   | 2   | *   | 0   | 0   | 0   | 0   | 0   | 0   | 1   | 1   | 1   | 8     | 8     |
| Windhoek.....                         | 1900          | 3              | 4   | 1   | 3   | *   | 0   | 0   | 0   | 0   | *   | 1   | 0   | 1   | 8     | 8     |

\* &lt; 0.5%.

FIGURE 41. PERCENTAGE FREQUENCY OF CEILING <1,000 FEET AT SPECIFIED HOURS  
(Ceiling defined as 5/8 or more cloud cover)

| COUNTRY AND STATION       | HOUR<br>(LST) |     |     |     |     |     |     |     |     |     |     |     |     | DATA BASE INFO |       |       |  |
|---------------------------|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|-------|-------|--|
|                           |               | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANN            | FOR   | CYR   |  |
| Botswana:                 |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |  |
| Francistown.....          | 0800          | 2   | 8   | 2   | 4   | 3   | 2   | 1   | 3   | 2   | 3   | 2   | 8   | 3              | 6     | 0     |  |
| Gaborone.....             | 0800          | *   | 1   | 2   | 3   | *   | 0   | 0   | 0   | 0   | 0   | *   | 0   | 1              | 7     | 6-7   |  |
| Ghanai.....               | 0700          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 1   | 1   | *              | 6     | 6     |  |
| Maun.....                 | 0800          | 4   | 5   | 5   | 1   | 0   | *   | 0   | 0   | 0   | 0   | 3   | 6   | 2              | 9     | 9     |  |
| Shakawe.....              | 0700          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 1   | *              | 5     | 5     |  |
| Tanlong.....              | 0700          | 1   | 0   | 1   | 1   | *   | 0   | 0   | 0   | 1   | 0   | 0   | 0   | *              | 6-7   | 6-7   |  |
| Tsane.....                | 0700          | 1   | 0   | 0   | 0   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | *              | 0     | 6     |  |
| Republic of South Africa: |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |  |
| Alexander Bay.....        | 0700          | 22  | 31  | 36  | 25  | 22  | 16  | 20  | 17  | 23  | 13  | 16  | 18  | 22             | 12    | 12    |  |
| Beaufort West.....        | 0800          | 1   | 1   | 6   | 6   | 3   | 2   | 3   | 3   | 3   | 2   | 2   | 1   | 3              | 11-12 | 11-12 |  |
| Bethlehem.....            | 0800          | 13  | 17  | 18  | 17  | 12  | 10  | 10  | 6   | 6   | 6   | 12  | 7   | 11             | 10-11 | 10-11 |  |
| Calvinia.....             | 0700          | 0   | 3   | 3   | 4   | 4   | 5   | 4   | 3   | 4   | 2   | 1   | *   | 3              | 12    | 12    |  |
| Cape Agulhas.....         | 0700          | 4   | 7   | 7   | 11  | 9   | 8   | 7   | 8   | 7   | 11  | 9   | 5   | 8              | 12    | 12    |  |
| Cape Columbine.....       | 0700          | 18  | 20  | 24  | 19  | 21  | 16  | 16  | 14  | 18  | 17  | 16  | 17  | 18             | 12    | 12    |  |
| Cape Saint Lucia.....     | 0800          | 13  | 14  | 10  | 12  | 6   | 9   | 7   | 11  | 17  | 18  | 22  | 13  | 13             | 11    | 11    |  |
| Cape Town/D.F. Malan..... | 0700          | 4   | 5   | 7   | 8   | 7   | 10  | 7   | 6   | 6   | 6   | 4   | 2   | 6              | 11-12 | 11-12 |  |
| De Aar.....               | 0800          | 1   | *   | *   | 3   | 3   | 4   | 2   | 1   | 0   | 1   | *   | 0   | 1              | 10-11 | 10-11 |  |
| Durban/Louis Botha.....   | 0800          | 6   | 2   | 3   | 2   | 0   | 1   | 0   | *   | 3   | 5   | 5   | 6   | 3              | 11-12 | 11-12 |  |
| East London.....          | 0800          | 12  | 10  | 11  | 5   | 5   | 1   | 3   | 2   | 6   | 10  | 14  | 11  | 3              | 12    | 12    |  |

Footnote at end of table.

FIGURE 41. FREQUENCY OF CEILING &lt;1,000 FEET (Continued)

| COUNTRY AND STATION                   | HOUR<br>(LST) |     |     |     |     |     |     |     |     |     |     |     |     | DATA BASE INFO |       |       |  |
|---------------------------------------|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|-------|-------|--|
|                                       |               | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANN            | FOR   | CYN   |  |
| Republic of South Africa (Continued): |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |  |
| Estcourt                              | 0800          | 1   | 3   | 1   | 2   | 1   | 0   | *   | *   | *   | 2   | 2   | 1   | 1              | 11    | 11    |  |
| Johannesburg/Jan Smuts                | 0800          | 20  | 10  | 17  | 18  | 9   | 6   | 8   | 7   | 9   | 12  | 16  | 19  | 13             | 12    | 12    |  |
| Kimberley                             | 0800          | 2   | 1   | 2   | *   | 2   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1              | 12    | 12    |  |
| Kuruman                               | 0800          | 1   | 2   | 2   | 2   | 1   | 1   | 0   | *   | *   | 1   | 2   | 0   | 1              | 9-11  | 9-11  |  |
| Lydenburg                             | 0800          | 22  | 11  | 13  | 13  | 8   | 2   | 3   | 4   | 4   | 6   | 16  | 0   | 9              | 5-6   | 5-6   |  |
| Macuville                             | 0800          | 0   | 2   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 1   | *              | 2-3   | 2-3   |  |
| Mafeking                              | 0800          | *   | 0   | 0   | 2   | *   | 0   | 0   | 0   | *   | *   | *   | 0   | *              | 9-10  | 9-10  |  |
| Marnitz                               | 0800          | 0   | 0   | 0   | 0   | *   | *   | 0   | 0   | 0   | 0   | 0   | *   | *              | 11-12 | 10-12 |  |
| Matroosberg                           | 0700          | 10  | 10  | 15  | 16  | 16  | 12  | 14  | 17  | 16  | 16  | 9   | 6   | 13             | 10-11 | 10-11 |  |
| Middelburg                            | 0800          | 11  | 12  | 16  | 11  | 8   | 6   | 6   | 7   | 7   | 5   | 9   | 5   | 8              | 11    | 10-11 |  |
| Okiep                                 | 0700          | 2   | 2   | 2   | 4   | 7   | 10  | 8   | 14  | 9   | 5   | 3   | 2   | 6              | 12-13 | 12-13 |  |
| Phalaborwa                            | 0800          | 17  | 20  | 12  | 21  | 12  | 9   | 7   | 11  | 12  | 9   | 16  | 14  | 13             | 9-10  | 9-10  |  |
| Pietersburg                           | 0800          | 8   | 9   | 7   | 12  | 6   | 7   | 6   | 8   | 7   | 9   | 6   | 10  | 8              | 12    | 12    |  |
| Piet Retief                           | 0800          | 25  | 28  | 22  | 24  | 14  | 11  | 9   | 12  | 19  | 24  | 23  | 17  | 19             | 10-12 | 10-12 |  |
| Port Elizabeth                        | 0800          | 8   | 6   | 10  | 8   | 3   | 1   | 6   | 4   | 5   | 9   | 7   | 6   | 6              | 12    | 12    |  |
| Port Saint Johns                      | 0800          | 4   | 3   | 1   | 3   | 1   | *   | 1   | *   | 3   | 4   | 2   | 8   | 2              | 12    | 12    |  |
| Queenstown                            | 0800          | 18  | 18  | 23  | 17  | 12  | 8   | 8   | 7   | 13  | 12  | 12  | 6   | 13             | 9-11  | 9-11  |  |
| Sheeprun                              | 0800          | 8   | 9   | 17  | 13  | 8   | 8   | 8   | 8   | 9   | 14  | 10  | 5   | 9              | 5-6   | 5-6   |  |
| Uppington                             | 0700          | 0   | *   | *   | 1   | 0   | 1   | 1   | *   | 0   | *   | *   | 0   | *              | 12    | 12    |  |
| Wepener                               | 0800          | 1   | 3   | 2   | 8   | 2   | 2   | 3   | 1   | *   | 1   | 2   | 1   | 2              | 12-18 | 12-18 |  |
| Willowmore                            | 0800          | 4   | 7   | 10  | 10  | 9   | 6   | 8   | 7   | 10  | 8   | 8   | 2   | 7              | 8-9   | 8-9   |  |
| South-West Africa:                    |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |  |
| Gobabis                               | 0700          | 0   | 0   | *   | 1   | *   | *   | 0   | 0   | 0   | 0   | 0   | 2   | *              | 8     | 8     |  |
| Keetmanshoop                          | 0700          | 0   | 0   | *   | 0   | *   | 1   | 0   | 1   | 0   | *   | 0   | 0   | *              | 9-10  | 9-10  |  |
| Mariental                             | 0700          | 0   | 0   | 0   | 1   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | *              | 8     | 8     |  |
| Outjo                                 | 0700          | 2   | 1   | 1   | *   | *   | 0   | 1   | 0   | *   | 0   | 0   | 0   | 1              | 8     | 8     |  |
| Windhoek                              | 0700          | 1   | 2   | 2   | 1   | 0   | 0   | *   | 0   | *   | 0   | 1   | 1   | 1              | 9-10  | 9-10  |  |
| Botswana:                             |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |  |
| Francistown                           | 1400          | 8   | 7   | 3   | 3   | 1   | 1   | 0   | 1   | 0   | 2   | 4   | 8   | 3              | 6     | 6     |  |
| Gaberones                             | 1400          | *   | 0   | 1   | 2   | 2   | 0   | 0   | 0   | 0   | *   | 1   | 1   | 1              | 6-7   | 6-7   |  |
| Ghanzi                                | 1300          | 0   | 0   | 0   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | *              | 6     | 6     |  |
| Maun                                  | 1400          | 3   | 6   | 4   | 1   | *   | 0   | *   | 0   | 0   | 1   | 3   | 7   | 2              | 9     | 8-9   |  |
| Shakawe                               | 1300          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0              | 8     | 8     |  |
| Tsabong                               | 1300          | 1   | 0   | 1   | *   | 0   | *   | 0   | 0   | 0   | 0   | 0   | 0   | *              | 6-7   | 6-7   |  |
| Tsane                                 | 1300          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0              | 6     | 6     |  |
| Republic of South Africa:             |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |  |
| Alexander Bay                         | 1300          | 1   | *   | 1   | 1   | 2   | 2   | 1   | *   | 1   | 1   | *   | 1   | 1              | 12    | 12    |  |
| Beaufort West                         | 1400          | 0   | 1   | *   | *   | *   | 0   | 0   | 0   | 0   | 1   | 1   | 0   | *              | 11-12 | 11-12 |  |
| Bethlehem                             | 1400          | 3   | 3   | 1   | 4   | 2   | 1   | 1   | 1   | 3   | 3   | 2   | 1   | 2              | 10-11 | 10-11 |  |
| Calvinia                              | 1300          | 0   | *   | 1   | 2   | 1   | 1   | 1   | 0   | *   | 1   | 0   | *   | 1              | 12    | 11-12 |  |
| Cape Agulhas                          | 1300          | 2   | 0   | 5   | 4   | 0   | 4   | 3   | 0   | 5   | 5   | 4   | 2   | 4              | 12    | 12    |  |
| Cape Columbine                        | 1300          | 0   | 9   | 9   | 11  | 11  | 13  | 11  | 10  | 8   | 9   | 9   | 6   | 9              | 12    | 12    |  |
| Cape Saint Lucia                      | 1400          | 9   | 10  | 6   | 9   | 5   | 0   | 9   | 5   | 12  | 12  | 15  | 6   | 9              | 11    | 10-11 |  |
| Cape Town/D.F. Malan                  | 1300          | *   | 1   | 1   | 2   | 3   | 3   | 2   | 3   | 3   | 1   | 1   | *   | 2              | 11-12 | 11-12 |  |
| De Aar                                | 1400          | 0   | 0   | 0   | 0   | 1   | 2   | 0   | *   | 1   | 0   | 0   | 0   | *              | 10-11 | 10-11 |  |
| Durban/Louis Botha                    | 1400          | 5   | 3   | 3   | 3   | 1   | 1   | *   | 1   | 3   | 3   | 7   | 5   | 3              | 11-12 | 11-12 |  |
| East London                           | 1400          | 9   | 9   | 11  | 6   | 4   | 1   | 2   | 2   | 5   | 10  | 10  | 7   | 6              | 12    | 12    |  |
| Estcourt                              | 1400          | 0   | 0   | 0   | *   | 0   | *   | *   | 0   | 0   | 1   | 0   | 0   | *              | 11    | 11    |  |
| Johannesburg/Jan Smuts                | 1400          | 1   | 1   | 2   | 4   | 1   | 1   | 1   | 1   | 1   | 1   | 3   | 3   | 2              | 12    | 12    |  |
| Kimberley                             | 1400          | 1   | 1   | 1   | 1   | 1   | 1   | 0   | 0   | 1   | *   | 1   | 0   | *              | 12    | 12    |  |
| Kuruman                               | 1400          | *   | 1   | *   | 1   | *   | *   | 0   | 0   | 0   | 0   | 1   | *   | *              | 9-11  | 9-11  |  |
| Lydenburg                             | 1400          | 5   | 4   | 1   | 5   | 1   | 1   | 0   | 0   | 0   | 1   | 7   | 4   | 2              | 5-6   | 5-6   |  |
| Macuville                             | 1400          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0              | 2-3   | 2-3   |  |
| Mafeking                              | 1400          | *   | 0   | 0   | *   | 0   | 0   | 0   | 0   | *   | *   | 1   | 0   | *              | 9-10  | 9-10  |  |
| Marnitz                               | 1400          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0              | 11-12 | 10-11 |  |
| Matroosberg                           | 1300          | *   | 1   | 2   | 2   | 8   | 5   | 3   | 4   | 3   | 4   | 1   | 2   | 3              | 10-11 | 10-11 |  |
| Middelburg                            | 1400          | 1   | 3   | 4   | 2   | 3   | 2   | 3   | 1   | 1   | 1   | 1   | 1   | 2              | 11    | 10-11 |  |
| Okiep                                 | 1300          | *   | *   | 1   | 1   | 4   | 6   | 5   | 5   | 3   | 3   | 1   | 1   | 3              | 12-13 | 12-13 |  |
| Phalaborwa                            | 1400          | 3   | 4   | 1   | 3   | *   | *   | 1   | 1   | 1   | 3   | 4   | 5   | 2              | 9-10  | 9-10  |  |
| Pietersburg                           | 1400          | 1   | *   | 0   | 1   | *   | 1   | *   | *   | 1   | *   | 1   | 2   | 1              | 12    | 12    |  |
| Piet Retief                           | 1400          | 8   | 9   | 8   | 9   | 3   | 3   | 3   | 3   | 7   | 9   | 11  | 7   | 7              | 10-11 | 9-11  |  |
| Port Elizabeth                        | 1400          | 4   | 2   | 5   | 5   | 4   | 2   | 3   | 3   | 3   | 5   | 4   | 4   | 3              | 12    | 12    |  |

Footnote at end of table.

FIGURE 41. FREQUENCY OF CEILING &lt;1,000 FEET (Continued)

| COUNTRY AND STATION                   | HOUR<br>(LST) |     |     |     |     |     |     |     |     |     |     |     |     | DATA BASE INFO |       |       |
|---------------------------------------|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|-------|-------|
|                                       |               | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANN            | FOR   | CYR   |
| Republic of South Africa (Continued): |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |
| Port Saint Johns.....                 | 1400          | 2   | 2   | 3   | 1   | 1   | 0   | *   | *   | 1   | 4   | 3   | 1   | 1              | 12    | 12    |
| Queenstown.....                       | 1400          | 3   | 2   | 4   | 4   | 1   | 2   | 1   | 1   | 3   | 3   | 3   | 1   | 2              | 9-11  | 8-11  |
| Sheeprun.....                         | 1400          | 1   | 1   | 2   | 1   | 1   | 0   | 1   | 0   | 0   | 2   | 2   | 2   | 1              | 5-6   | 5-6   |
| Uptington.....                        | 1300          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0              | 12    | 12    |
| Walvis Bay.....                       | 1300          | 10  | 13  | 14  | 18  | 25  | 13  | 13  | 23  | 18  | 19  | 10  | 13  | 10             | 7-8   | 5-6   |
| Wepener.....                          | 1400          | 1   | 1   | 2   | *   | *   | *   | *   | 0   | 0   | 0   | *   | 0   | *              | 12-13 | 12-13 |
| Willowmore.....                       | 1400          | *   | 1   | 3   | 4   | 1   | 1   | 2   | 1   | 2   | *   | 1   | 0   | 1              | 5-9   | 7-9   |
| South-West Africa:                    |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |
| Gobabis.....                          | 1300          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | *   | 0   | *              | 8     | 8     |
| Keetmanshoop.....                     | 1300          | 0   | 0   | 0   | 0   | 0   | *   | 0   | 0   | 0   | 0   | 0   | 0   | *              | 9-10  | 9-10  |
| Mariental.....                        | 1300          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0              | 8     | 7-8   |
| Outjo.....                            | 1300          | 0   | *   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | *              | 8     | 8     |
| Windhoek.....                         | 1300          | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | *   | *   | *   | *              | 9-10  | 9-10  |
| Botswana:                             |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |
| Francistown.....                      | 2000          | 5   | 3   | 0   | 0   | 1   | 0   | 0   | 0   | 0   | 1   | 4   | 4   | 1              | 6     | 6     |
| Gaborone.....                         | 2000          | 1   | 0   | 1   | 1   | 0   | 0   | 0   | 0   | 0   | 1   | 0   | 0   | *              | 6-7   | 6-7   |
| Ghanzi.....                           | 1900          | 0   | 0   | 1   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 2   | *              | 5-6   | 5-6   |
| Maun.....                             | 2000          | 2   | 2   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | *   | 1   | 4   | 1              | 9     | 8-9   |
| Shakawe.....                          | 1900          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0              | 5     | 5     |
| Tsabong.....                          | 1900          | 0   | 0   | 1   | 0   | 0   | *   | 0   | 0   | 0   | 0   | 1   | *   | *              | 6-7   | 6-7   |
| Tsane.....                            | 1900          | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | *              | 6     | 0     |
| Republic of South Africa:             |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |
| Alexander Bay.....                    | 1900          | 9   | 16  | 12  | 11  | 13  | 9   | 10  | 5   | 7   | 4   | 8   | 11  | 10             | 10-11 | 10-11 |
| Beaufort West.....                    | 2000          | *   | 1   | 1   | 0   | 1   | *   | 1   | 0   | *   | 2   | 1   | 0   | *              | 11-12 | 10-12 |
| Bethlehem.....                        | 2000          | 3   | 3   | 2   | 3   | *   | *   | 1   | *   | 3   | 2   | 2   | 1   | 2              | 10-11 | 10-11 |
| Calvinia.....                         | 1900          | 0   | 0   | 1   | 2   | 1   | 1   | 1   | *   | *   | 1   | 1   | *   | 1              | 11-12 | 10-12 |
| Cape Agulhas.....                     | 1900          | 5   | 7   | 5   | 5   | 6   | 4   | 4   | 4   | 4   | 7   | 4   | 5   | 3              | 12    | 11-12 |
| Cape Columbine.....                   | 1900          | 8   | 10  | 14  | 11  | 15  | 13  | 6   | 8   | 8   | 8   | 6   | 7   | 9              | 12    | 11-12 |
| Cape Saint Lucia.....                 | 2000          | 11  | 11  | 6   | 9   | 4   | 5   | 6   | 8   | 13  | 16  | 20  | 13  | 10             | 11    | 10-11 |
| Cape Town/D.F. Malan.....             | 1900          | 3   | 4   | 5   | 5   | 5   | 6   | 3   | 3   | 3   | 3   | 2   | 3   | 4              | 11-12 | 11-12 |
| De Aar.....                           | 2000          | 0   | 0   | 0   | *   | 0   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | *              | 10-11 | 10-11 |
| Durban/Louis Botha.....               | 2000          | 6   | 3   | 4   | 1   | 1   | 0   | 1   | 1   | 5   | 8   | 8   | 8   | 4              | 11-12 | 11-12 |
| East London.....                      | 2000          | 13  | 9   | 13  | 8   | 3   | 3   | 2   | 4   | 5   | 12  | 11  | 11  | 8              | 11-12 | 10-12 |
| Katootort.....                        | 2000          | *   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | *   | *   | *   | *              | 11    | 11    |
| Johannesburg/Jan Smuts.....           | 2000          | 2   | 2   | 1   | 5   | 1   | 1   | 1   | 1   | 3   | 1   | 4   | 2   | 2              | 12    | 12    |
| Kimberley.....                        | 2000          | 0   | *   | 1   | 1   | 1   | 1   | 1   | *   | 0   | 0   | 0   | 1   | 0              | 12    | 12    |
| Kuruman.....                          | 2000          | 1   | *   | 1   | 0   | *   | 0   | 0   | 0   | 0   | 0   | 1   | 0   | *              | 9-11  | 9-11  |
| Lydenburg.....                        | 2000          | 9   | 3   | 3   | 4   | 1   | 1   | 0   | 1   | 1   | 2   | 4   | 4   | 3              | 5-6   | 5-6   |
| Macquarie.....                        | 2000          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 1   | 0   | *              | 2-3   | 2-3   |
| Mafeking.....                         | 2000          | 1   | 0   | 0   | *   | 0   | 0   | 0   | 0   | 0   | 1   | 1   | *   | *              | 9-10  | 9-10  |
| Marnitz.....                          | 2000          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0              | 11-12 | 10-12 |
| Matroosberg.....                      | 1900          | 2   | *   | 4   | 3   | 3   | 3   | 3   | 3   | 2   | 5   | 2   | 3   | 3              | 10-11 | 10-11 |
| Middelburg.....                       | 2000          | 2   | 4   | 5   | 2   | 1   | 1   | 1   | 1   | 1   | 1   | 2   | 1   | 2              | 10-11 | 10-11 |
| Okiep.....                            | 1900          | *   | *   | 1   | 3   | 2   | 7   | 5   | 7   | 3   | 4   | 2   | *   | 3              | 12-13 | 12-13 |
| Phalaborwa.....                       | 2000          | 6   | 5   | 2   | 7   | 1   | 3   | 2   | 1   | 1   | 5   | 6   | 8   | 4              | 9-10  | 9-10  |
| Pieteraburg.....                      | 2000          | *   | *   | 1   | 0   | 0   | 0   | 0   | *   | 1   | 1   | 1   | 1   | *              | 12    | 11-12 |
| Piet Retief.....                      | 2000          | 19  | 17  | 12  | 16  | 4   | 6   | 6   | 7   | 13  | 19  | 19  | 15  | 13             | 10-12 | 10-11 |
| Port Elizabeth.....                   | 1900          | 6   | 6   | 7   | 3   | 4   | 1   | 1   | 5   | 6   | 6   | 5   | 5   | 5              | 12    | 12    |
| Port Saint Johns.....                 | 2000          | 3   | 3   | 3   | 1   | *   | *   | *   | 1   | 3   | 5   | 2   | 2   | 2              | 12    | 10-12 |
| Queenstown.....                       | 2000          | 11  | 7   | 11  | 5   | 4   | 1   | 1   | *   | 5   | 7   | 14  | 6   | 6              | 5-9   | 5-9   |
| Sheeprun.....                         | 2000          | 12  | 4   | 5   | 4   | 1   | 0   | 1   | 0   | 1   | 7   | 3   | 6   | 4              | 5-6   | 5-6   |
| Uptington.....                        | 1900          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0              | 12    | 12    |
| Wepener.....                          | 2000          | *   | 1   | 2   | 1   | *   | *   | *   | 0   | *   | 0   | 1   | 0   | *              | 12-13 | 12-13 |
| Willowmore.....                       | 2000          | 1   | *   | 3   | 2   | 2   | 1   | 3   | 2   | 1   | 1   | *   | *   | 1              | 5-9   | 7-9   |
| South-West Africa:                    |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |
| Gobabis.....                          | 1900          | 0   | 0   | 0   | *   | 0   | 0   | 0   | 0   | 0   | 0   | *   | 0   | *              | 8     | 8     |
| Keetmanshoop.....                     | 1900          | 0   | *   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | *              | 9-10  | 9-10  |
| Mariental.....                        | 1900          | *   | 0   | 1   | 1   | *   | 0   | 0   | 0   | 0   | 0   | 1   | 0   | *              | 8     | 7-8   |
| Outjo.....                            | 1900          | 0   | *   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | *              | 8     | 8     |
| Windhoek.....                         | 1900          | 1   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | *   | 0   | *              | 8     | 8     |

\* &lt; 0.5%.

FIGURE 42. PERCENTAGE FREQUENCY OF CEILING <650 FEET AT SPECIFIED HOURS  
(Ceiling defined as  $\frac{1}{8}$  or more cloud cover)

| COUNTRY AND STATION         | HOUR<br>(LST) |     |     |     |     |     |     |     |     |     |     |     |     | DATA BASE INFO |       |       |
|-----------------------------|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|-------|-------|
|                             |               | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANN            | FOR   | CYR   |
| Botswana:                   |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |
| Francistown.....            | 0800          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 1   | 1   | 1   | 1   | 2   | *              | 6     | 6     |
| Gaborone.....               | 0800          | 0   | 0   | 0   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | *              | 7     | 6-7   |
| Ghausi.....                 | 0700          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0              | 6     | 6     |
| Maun.....                   | 0800          | 1   | 1   | 2   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 1   | 1   | 1              | 9     | 9     |
| Shakawe.....                | 0700          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0              | 8     | 8     |
| Tsabong.....                | 0700          | 0   | 0   | 1   | *   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | *              | 6-7   | 6-7   |
| Tsane.....                  | 0700          | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | *              | 6     | 6     |
| Republic of South Africa:   |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |
| Alexander Bay.....          | 0700          | 11  | 21  | 30  | 20  | 19  | 14  | 17  | 13  | 17  | 6   | 7   | 11  | 10             | 12    | 12    |
| Beaufort West.....          | 0800          | *   | 1   | 5   | 8   | 8   | 2   | 3   | 3   | 2   | 1   | 2   | 1   | 2              | 11-12 | 11-12 |
| Bethlehem.....              | 0800          | 3   | 5   | 6   | 8   | 8   | 7   | 6   | 4   | 1   | 2   | 4   | 3   | 5              | 10-11 | 10-11 |
| Calvinia.....               | 0700          | 0   | 3   | 2   | 4   | 3   | 4   | 3   | 2   | 3   | 2   | *   | 0   | 2              | 12    | 12    |
| Cape Agulhas.....           | 0700          | 1   | 3   | 2   | 4   | 3   | 2   | 3   | 1   | 2   | 2   | 3   | 1   | 2              | 12    | 12    |
| Cape Columbine.....         | 0700          | 13  | 17  | 22  | 16  | 15  | 9   | 9   | 8   | 8   | 9   | 11  | 12  | 12             | 12    | 12    |
| Cape Saint Lucia.....       | 0800          | 1   | 2   | 1   | *   | 1   | 1   | 1   | 1   | 3   | 2   | 1   | 1   | 1              | 11    | 11    |
| Cape Town/D.F. Malan.....   | 0700          | 1   | 5   | 6   | 8   | 4   | 6   | 4   | 3   | 3   | 3   | 3   | 1   | 4              | 11-12 | 11-12 |
| De Aar.....                 | 0800          | 0   | 0   | *   | 1   | *   | 2   | *   | 1   | 0   | *   | 0   | 0   | *              | 10-11 | 10-11 |
| Durban/Louis Botha.....     | 0800          | 1   | *   | *   | *   | 0   | 0   | 0   | 0   | 1   | 1   | 1   | 2   | 1              | 11-12 | 11-12 |
| East London.....            | 0800          | 6   | 6   | 6   | 3   | 1   | *   | 1   | 1   | 3   | 7   | 8   | 7   | 4              | 12    | 12    |
| Estcourt.....               | 0800          | 1   | 2   | 1   | 1   | 1   | 0   | *   | *   | 0   | 1   | 1   | *   | 1              | 11    | 11    |
| Johannesburg/Jan Smuts..... | 0800          | 11  | 8   | 11  | 13  | 8   | 6   | 5   | 5   | 8   | 6   | 7   | 9   | 8              | 12    | 12    |
| Kimberley.....              | 0800          | 1   | 1   | 1   | 0   | 2   | 1   | 1   | *   | 0   | 0   | *   | 0   | *              | 12    | 12    |
| Kuruman.....                | 0800          | 0   | *   | 0   | *   | *   | *   | 0   | 0   | 0   | 0   | 0   | 0   | *              | 9-11  | 9-11  |
| Lydenburg.....              | 0800          | 3   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 3   | 1   | *              | 5-6   | 5-6   |
| Macouville.....             | 0800          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0              | 2-3   | 2-3   |
| Mafeking.....               | 0800          | 0   | 0   | 0   | 1   | 0   | 0   | 0   | 0   | 0   | *   | 0   | 0   | *              | 9-10  | 9-10  |
| Marrits.....                | 0800          | 0   | 0   | 0   | 0   | *   | *   | 0   | 0   | 0   | 0   | 0   | *   | *              | 11-12 | 10-12 |
| Matroosburg.....            | 0700          | 4   | 1   | 3   | 5   | 5   | 4   | 3   | 3   | 4   | 4   | 2   | 2   | 3              | 10-11 | 10-11 |
| Middelburg.....             | 0800          | 4   | 6   | 9   | 9   | 2   | 4   | 4   | 2   | 3   | 1   | 2   | 1   | 4              | 11    | 10-11 |
| Okiep.....                  | 0700          | 1   | *   | 1   | 1   | 2   | 4   | 2   | 3   | 2   | 2   | *   | 0   | 1              | 12-13 | 12-13 |
| Phalaborwa.....             | 0800          | 7   | 10  | 6   | 9   | 4   | 5   | 3   | 4   | 5   | 4   | 7   | 7   | 6              | 9-10  | 9-10  |
| Pietersburg.....            | 0800          | *   | 2   | 1   | 3   | 3   | 5   | 4   | 2   | 1   | 3   | 2   | 1   | 2              | 12    | 12    |
| Piet Retief.....            | 0800          | 10  | 10  | 9   | 10  | 7   | 6   | 4   | 7   | 8   | 10  | 10  | 6   | 8              | 10-12 | 10-12 |
| Port Elizabeth.....         | 0800          | 4   | 4   | 5   | 3   | 2   | *   | 2   | 2   | 3   | 5   | 5   | 4   | 3              | 12    | 12    |
| Port Saint John.....        | 0800          | 1   | *   | 1   | 0   | *   | 0   | 0   | 0   | 1   | 1   | 0   | 1   | *              | 12    | 12    |
| Queenstown.....             | 0800          | 5   | 7   | 6   | 7   | 7   | 5   | 7   | 3   | 7   | 2   | 4   | 2   | 5              | 9-11  | 9-11  |
| Sheeprun.....               | 0800          | 2   | 3   | 10  | 8   | 3   | 5   | 4   | 4   | 5   | 6   | 6   | 2   | 5              | 5-6   | 5-6   |
| Uppington.....              | 0700          | 0   | 0   | 0   | *   | 0   | 1   | 1   | *   | 0   | *   | 0   | 0   | *              | 12    | 12    |
| Wepener.....                | 0800          | 1   | 2   | 1   | 4   | 2   | 2   | 2   | 1   | *   | 1   | 1   | 0   | 1              | 12-13 | 12-13 |
| Willemsmoore.....           | 0800          | 1   | 2   | 4   | 6   | 5   | 3   | 3   | 3   | 4   | 2   | 1   | *   | 3              | 8-9   | 8-9   |
| South-West Africa:          |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |
| Gobabis.....                | 0700          | 0   | 0   | 0   | *   | *   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | *              | 8     | 8     |
| Keetmanshoop.....           | 0700          | 0   | 0   | 0   | 0   | 0   | 1   | 0   | 1   | 0   | *   | 0   | 0   | *              | 9-10  | 9-10  |
| Mariental.....              | 0700          | 0   | 0   | 0   | *   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | *              | 8     | 8     |
| Outjo.....                  | 0700          | 0   | *   | *   | *   | 0   | 0   | 1   | 0   | *   | 0   | 0   | 0   | *              | 8     | 8     |
| Windhoek.....               | 0700          | 1   | 1   | 2   | 1   | 0   | 0   | *   | 0   | *   | 0   | 1   | *   | 1              | 9-10  | 9-10  |

\* < 0.5%.

FIGURE 43. PERCENTAGE FREQUENCY OF VISIBILITY &lt;6 MILES AT SPECIFIED HOURS

| COUNTRY AND STATION         | HOUR<br>(LST) |     |     |     |     |     |     |     |     |     |     |     |     | DATA BASE INFO |       |       |  |
|-----------------------------|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|-------|-------|--|
|                             |               | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANN            | POS   | CTR   |  |
| Botswana:                   |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |  |
| Francistown.....            | 0800          | 1   | 0   | 1   | 0   | 0   | 1   | 0   | 1   | 0   | 1   | 1   | 1   | *              | 6     | 6     |  |
| Gaboronea.....              | 0800          | *   | 2   | *   | *   | 0   | 0   | 0   | 0   | 0   | 1   | 1   | 2   | 1              | 7     | 6-7   |  |
| Ghanzi.....                 | 0700          | 0   | 0   | 0   | 0   | 1   | 0   | 0   | 0   | 1   | 0   | 1   | 0   | *              | 6     | 6     |  |
| Maun.....                   | 0800          | 1   | *   | 1   | 1   | 1   | 1   | 11  | 16  | 23  | 20  | 3   | 2   | 7              | 9     | 9     |  |
| Shakawe.....                | 0700          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0              | 5     | 5     |  |
| Tsabong.....                | 0700          | 0   | 0   | 0   | 1   | 0   | *   | 1   | 0   | 0   | 0   | 0   | 0   | *              | 6-7   | 6-7   |  |
| Tsane.....                  | 0700          | 1   | 0   | 0   | 0   | 0   | 2   | 0   | 0   | 0   | 0   | 0   | 0   | *              | 6     | 6     |  |
| Republic of South Africa:   |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |  |
| Alexander Bay.....          | 0700          | 16  | 30  | 41  | 31  | 33  | 23  | 27  | 27  | 28  | 20  | 16  | 16  | 26             | 12    | 12    |  |
| Beaufort West.....          | 0800          | 1   | 2   | 5   | 6   | 5   | 5   | 6   | 7   | 6   | 4   | 3   | 2   | 4              | 11-12 | 11-12 |  |
| Bethlehem.....              | 0800          | 14  | 22  | 46  | 52  | 55  | 49  | 55  | 61  | 55  | 35  | 15  | 13  | 40             | 10-11 | 10-11 |  |
| Calvinia.....               | 0700          | *   | 10  | 7   | 5   | 5   | 7   | 5   | 4   | 4   | 2   | *   | *   | 4              | 12    | 12    |  |
| Cape Agulhas.....           | 0700          | 7   | 9   | 10  | 12  | 12  | 16  | 13  | 9   | 8   | 11  | 9   | 6   | 11             | 12    | 12    |  |
| Cape Columbine.....         | 0700          | 21  | 24  | 22  | 24  | 23  | 16  | 17  | 12  | 13  | 10  | 15  | 19  | 19             | 12    | 12    |  |
| Cape Saint Lucia.....       | 0800          | 5   | 6   | 5   | 5   | 4   | 5   | 5   | 4   | 5   | 7   | 7   | 5   | 6              | 11    | 11    |  |
| Cape Town/D.F. Malan.....   | 0700          | 8   | 10  | 14  | 20  | 23  | 24  | 23  | 22  | 14  | 11  | 9   | 7   | 15             | 11-12 | 11-12 |  |
| De Aar.....                 | 0800          | 3   | 3   | 7   | 15  | 25  | 32  | 35  | 35  | 9   | 4   | 2   | 1   | 13             | 10-11 | 10-11 |  |
| Durban/Louis Botha.....     | 0800          | 19  | 19  | 26  | 34  | 35  | 47  | 48  | 52  | 3   | 25  | 17  | 15  | 32             | 11-12 | 11-12 |  |
| East London.....            | 0800          | 14  | 12  | 15  | 9   | 4   | 2   | 3   | 3   |     | 12  | 13  | 11  | 9              | 12    | 12    |  |
| Estcourt.....               | 0800          | 11  | 18  | 23  | 22  | 25  | 34  | 27  | 30  | 2   | 15  | 10  | 10  | 21             | 11    | 11    |  |
| Johannesburg/Jan Smuts..... | 0800          | 13  | 12  | 22  | 32  | 35  | 47  | 46  | 40  | 20  | 14  | 14  | 13  | 25             | 12    | 12    |  |
| Kimberley.....              | 0800          | 2   | 4   | 7   | 9   | 15  | 20  | 20  | 21  | 6   | 2   | 2   | 1   | 9              | 12    | 12    |  |
| Kuruman.....                | 0800          | 1   | 1   | 1   | 1   | *   | *   | 1   | 1   | 5   | 3   | 2   | 1   | 1              | 9-11  | 9-11  |  |
| Lydenburg.....              | 0800          | 1   | 0   | 0   | 3   | 1   | 1   | 0   | 2   | 2   | 1   | 5   | 3   | 2              | 5-6   | 5-6   |  |
| Macouville.....             | 0800          | 0   | 2   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | *              | 2-3   | 2-3   |  |
| Mafeking.....               | 0800          | 1   | 2   | 2   | 1   | 1   | 1   | 2   | 9   | 9   | 7   | 4   | 1   | 3              | 9-10  | 9-10  |  |
| Marnitz.....                | 0800          | 1   | 11  | 9   | 10  | 9   | 9   | 9   | 9   | 15  | 13  | 8   | 4   | 5              | 11-12 | 10-12 |  |
| Matroosberg.....            | 0700          | 6   | 6   | 7   | 10  | 13  | 9   | 7   | 9   | 8   | 6   | 5   | 4   | 8              | 10-11 | 10-11 |  |
| Middelburg.....             | 0800          | 2   | 2   | 5   | 6   | 4   | 5   | 5   | 3   | 4   | 3   | 2   | 1   | 3              | 11    | 10-11 |  |
| (Klep.....                  | 0700          | 1   | *   | 2   | 3   | 4   | 6   | 7   | 10  | 5   | 3   | *   | 0   | 3              | 12-13 | 12-13 |  |
| Phalaborwa.....             | 0800          | 3   | 3   | 5   | 3   | 1   | 2   | *   | 2   | 1   | 1   | 4   | 2   | 2              | 9-10  | 9-10  |  |
| Pietersburg.....            | 0800          | 2   | 3   | 1   | 6   | 20  | 30  | 28  | 28  | 14  | 6   | 2   | 3   | 12             | 12    | 12    |  |
| Piet Retief.....            | 0800          | 37  | 40  | 45  | 40  | 35  | 33  | 42  | 43  | 43  | 41  | 39  | 31  | 39             | 10-12 | 10-12 |  |
| Port Elizabeth.....         | 0800          | 8   | 9   | 13  | 17  | 17  | 19  | 19  | 23  | 15  | 13  | 8   | 6   | 14             | 12    | 12    |  |
| Port Saint Johns.....       | 0800          | 17  | 15  | 12  | 6   | 3   | 3   | 4   | 6   | 9   | 11  | 13  | 11  | 9              | 12    | 12    |  |
| Queenstown.....             | 0800          | 12  | 20  | 24  | 35  | 25  | 25  | 25  | 24  | 24  | 16  | 11  | 8   | 21             | 9-11  | 9-11  |  |
| Sheeprun.....               | 0800          | 13  | 9   | 14  | 12  | 5   | 5   | 7   | 7   | 7   | 17  | 13  | 6   | 10             | 5-6   | 5-6   |  |
| Uppington.....              | 0700          | *   | *   | *   | 1   | 1   | 5   | 1   | 1   | 1   | *   | 1   | *   | 1              | 12    | 12    |  |
| Wepener.....                | 0800          | 11  | 20  | 33  | 35  | 55  | 65  | 64  | 47  | 40  | 21  | 9   | 14  | 35             | 12-13 | 12-13 |  |
| Willowmore.....             | 0800          | 0   | 2   | 5   | 7   | 7   | 3   | 4   | 5   | 4   | 2   | 0   | 0   | 3              | 8-9   | 8-9   |  |
| South-West Africa:          |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |  |
| Gobabis.....                | 0700          | 0   | 0   | 3   | 0   | *   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | *              | 8     | 8     |  |
| Keetmanshoop.....           | 0700          | *   | 0   | *   | *   | *   | 1   | 0   | *   | 0   | 1   | 0   | 0   | *              | 9-10  | 9-10  |  |
| Mariental.....              | 0700          | *   | 0   | 0   | *   | 1   | *   | 0   | 0   | 0   | *   | 0   | 0   | *              | 8     | 8     |  |
| Outjo.....                  | 0700          | 1   | 3   | *   | *   | 0   | 0   | *   | 0   | 1   | 0   | *   | 0   | 1              | 8     | 8     |  |
| Windhoek.....               | 0700          | 2   | 4   | 2   | 3   | 0   | 0   | *   | 0   | *   | 1   | 1   | *   | 1              | 9-10  | 9-10  |  |
| Botswana:                   |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |  |
| Francistown.....            | 1400          | 0   | 2   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 2   | 1   | 1   | *              | 6     | 6     |  |
| Gaboronea.....              | 1400          | 1   | 2   | 0   | 1   | 0   | 0   | 0   | *   | 0   | 3   | 1   | 1   | 1              | 6-7   | 3-7   |  |
| Ghanzi.....                 | 1300          | 1   | 1   | 0   | 0   | 0   | 0   | 0   | 1   | 1   | 1   | 0   | 0   | *              | 6     | 6     |  |
| Maun.....                   | 1400          | 1   | *   | 1   | 0   | 1   | 3   | 17  | 23  | 31  | 28  | 4   | 4   | 9              | 9     | 8-9   |  |
| Shakawe.....                | 1300          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0              | 5     | 5     |  |
| Tsabong.....                | 1300          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0              | 6-7   | 6-7   |  |
| Tsane.....                  | 1300          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0              | 6     | 6     |  |
| Republic of South Africa:   |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |  |
| Alexander Bay.....          | 1300          | 2   | 2   | 1   | 3   | 5   | 5   | 5   | 7   | 6   | 7   | 6   | 3   | 4              | 12    | 12    |  |
| Beaufort West.....          | 1400          | 1   | 1   | 1   | 2   | 2   | 1   | 2   | 3   | 4   | 2   | 2   | 2   | 2              | 11-12 | 11-12 |  |
| Bethlehem.....              | 1400          | 4   | 5   | 9   | 8   | 4   | 4   | 4   | 8   | 9   | 13  | 5   | 3   | 6              | 10-11 | 10-11 |  |
| Calvinia.....               | 1300          | 0   | 7   | 4   | 1   | 3   | 3   | 1   | *   | *   | 1   | 0   | *   | 2              | 12    | 11-12 |  |
| Cape Agulhas.....           | 1300          | 4   | 4   | 5   | 9   | 7   | 5   | 9   | 7   | 4   | 7   | 4   | 4   | 6              | 12    | 12    |  |
| Cape Columbine.....         | 1300          | 7   | 10  | 15  | 16  | 12  | 9   | 9   | 7   | 4   | 6   | 5   | 6   | 9              | 12    | 12    |  |
| Cape Saint Lucia.....       | 1400          | 5   | 4   | 4   | 5   | 1   | 4   | 7   | 3   | 9   | 6   | 4   | 6   | 5              | 11    | 10-11 |  |
| Cape Town/D.F. Malan.....   | 1300          | 2   | 3   | 1   | 6   | 10  | 5   | 7   | 5   | 5   | 4   | 2   | 2   | 5              | 11-12 | 11-12 |  |

Footnote at end of table.

FIGURE 43. FREQUENCY OF VISIBILITY &lt;6 MILES (Continued)

| COUNTRY AND STATION                   | HOUR<br>(LST) |     |     |     |     |     |     |     |     |     |     |     |     | DATA BASE INFO |       |       |
|---------------------------------------|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|-------|-------|
|                                       |               | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANN            | FOR   | CVR   |
| Republic of South Africa (Continued): |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |
| De Aar.....                           | 1400          | 2   | 2   | 3   | 3   | 1   | *   | 1   | 1   | 3   | 2   | 2   | 2   | 2              | 10-11 | 10-11 |
| Durban/Louis Botha.....               | 1400          | 8   | 5   | 4   | 4   | 3   | 5   | 5   | 8   | 8   | 6   | 8   | 7   | 6              | 11-12 | 11-12 |
| East London.....                      | 1400          | 8   | 7   | 10  | 7   | 5   | 3   | 6   | 4   | 9   | 12  | 8   | 6   | 7              | 12    | 12    |
| Eatcourt.....                         | 1400          | 4   | 4   | 1   | 3   | 1   | 1   | 1   | 1   | 2   | 3   | 4   | 4   | 2              | 11    | 11    |
| Johannesburg/Jan Smuts.....           | 1400          | 2   | 4   | 3   | 3   | 2   | 4   | 5   | 2   | 2   | 3   | 4   | 3   | 3              | 12    | 12    |
| Kimberley.....                        | 1400          | 2   | 1   | 1   | 2   | 1   | 1   | 1   | 1   | 1   | 2   | 2   | 1   | 1              | 12    | 12    |
| Kuruman.....                          | 1400          | 1   | 1   | 1   | 2   | 0   | 1   | 1   | 1   | 2   | 2   | 1   | 1   | 1              | 9-11  | 9-11  |
| Lydenburg.....                        | 1400          | 1   | 1   | 1   | 1   | 1   | 0   | 0   | 1   | 0   | 1   | 4   | 3   | 1              | 8-9   | 8-9   |
| Macouville.....                       | 1400          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 2   | 0   | 0   | 0   | *              | 2-3   | 2-3   |
| Mafeking.....                         | 1400          | 1   | *   | 2   | 0   | *   | 1   | 1   | 2   | 6   | 7   | 8   | 1   | 2              | 9-10  | 9-10  |
| Marnitz.....                          | 1400          | 1   | 10  | 9   | 9   | 9   | 7   | 8   | 8   | 16  | 11  | 8   | 1   | 8              | 11-12 | 10-11 |
| Matroosberg.....                      | 1300          | 1   | 2   | 3   | 5   | 5   | 5   | 2   | 4   | 3   | 2   | 2   | 2   | 3              | 10-11 | 10-11 |
| Middelburg.....                       | 1400          | 1   | 3   | 3   | 2   | 1   | 2   | 1   | 1   | 2   | 3   | 4   | 1   | 2              | 11    | 10-11 |
| Okiep.....                            | 1300          | 0   | 0   | *   | 1   | 3   | 1   | 2   | 2   | 1   | 1   | 0   | 0   | 1              | 12-13 | 12-13 |
| Phalaborwa.....                       | 1400          | 2   | 0   | 1   | 1   | *   | 0   | *   | 1   | 0   | 2   | 1   | 2   | 1              | 9-10  | 9-10  |
| Pietersburg.....                      | 1400          | 1   | 1   | 1   | *   | 0   | *   | 1   | 1   | 4   | 2   | *   | 2   | 1              | 12    | 12    |
| Piet Retief.....                      | 1400          | 23  | 26  | 20  | 22  | 9   | 11  | 18  | 22  | 25  | 27  | 28  | 24  | 22             | 10-11 | 9-11  |
| Port Elizabeth.....                   | 1400          | 3   | 2   | 5   | 5   | 6   | 4   | 4   | 4   | 4   | 4   | 3   | 2   | 4              | 12    | 12    |
| Port Saint Johns.....                 | 1400          | 12  | 9   | 9   | 5   | 2   | 1   | 2   | 4   | 6   | 9   | 10  | 6   | 6              | 12    | 12    |
| Queenstown.....                       | 1400          | 3   | 4   | 4   | 6   | 4   | 5   | 3   | 3   | 4   | 3   | 4   | 3   | 4              | 9-11  | 8-11  |
| Sheepun.....                          | 1400          | 6   | 2   | 3   | 3   | 1   | 3   | 1   | 3   | 0   | 6   | 4   | 2   | 3              | 8-9   | 8-9   |
| Uptington.....                        | 1300          | 0   | 1   | *   | *   | *   | *   | 1   | 1   | 1   | 2   | *   | *   | 1              | 12    | 12    |
| Walvis Bay.....                       | 1300          | 2   | 3   | 7   | 16  | 24  | 14  | 18  | 17  | 12  | 9   | 5   | 4   | 10             | 7-8   | 5-6   |
| Wepener.....                          | 1400          | 4   | 6   | 9   | 5   | 5   | 5   | 10  | 7   | 10  | 7   | 6   | 6   | 7              | 12-13 | 12-13 |
| Willowmore.....                       | 1400          | 0   | 0   | 0   | 1   | 2   | 0   | *   | 0   | *   | 0   | 0   | 0   | *              | 8-9   | 7-9   |
| South-West Africa:                    |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |
| Jobabie.....                          | 1300          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0              | 8     | 8     |
| Keetmanshoop.....                     | 1300          | 0   | 0   | 0   | 0   | *   | 0   | 1   | 1   | 1   | 1   | *   | *   | *              | 9-10  | 9-10  |
| Mariental.....                        | 1300          | 0   | *   | 0   | 0   | 0   | 2   | 1   | 1   | *   | 1   | *   | 0   | *              | 8     | 7-8   |
| Outjo.....                            | 1300          | 0   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | *   | *              | 8     | 8     |
| Windhoek.....                         | 1300          | 3   | 2   | 2   | *   | *   | 0   | 1   | 0   | 0   | *   | 1   | 1   | 1              | 9-10  | 9-10  |
| Botswana:                             |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |
| Francistown.....                      | 2000          | 1   | 2   | 0   | 1   | 0   | 0   | 0   | 0   | 0   | 1   | 1   | 2   | 1              | 6     | 6     |
| Gaborone.....                         | 2000          | 1   | 1   | 1   | 1   | 0   | 0   | 0   | 0   | 0   | 1   | 2   | 2   | 1              | 6-7   | 6-7   |
| Ghanzi.....                           | 1900          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0              | 5-6   | 5-6   |
| Maun.....                             | 2000          | 1   | 0   | 0   | 0   | 1   | 3   | 12  | 21  | 29  | 24  | 8   | 4   | 8              | 9     | 8-9   |
| Mhakwe.....                           | 1900          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0              | 5     | 5     |
| Tlokgeng.....                         | 1900          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | *   | *              | 6-7   | 6-7   |
| Tlokweng.....                         | 1900          | 1   | 0   | 0   | 0   | 0   | 0   | 1   | 0   | 0   | 0   | 0   | 0   | *              | 6     | 6     |
| Republic of South Africa:             |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |
| Alexander Bay.....                    | 1900          | 6   | 11  | 13  | 12  | 10  | 9   | 11  | 11  | 11  | 9   | 12  | 8   | 10             | 10-11 | 10-11 |
| Beaufort West.....                    | 2000          | 3   | 1   | 1   | 1   | 3   | 1   | 1   | 3   | 4   | 3   | 2   | 1   | 2              | 11-12 | 10-12 |
| Bethlehem.....                        | 2000          | 5   | 7   | 11  | 11  | 12  | 15  | 10  | 5   | 5   | 12  | 6   | 6   | 9              | 10-11 | 10-11 |
| Calvinia.....                         | 1900          | 1   | 3   | 1   | 1   | 2   | 1   | 1   | 1   | *   | 1   | 1   | *   | 1              | 11-12 | 10-12 |
| Cape Agulhas.....                     | 1900          | 4   | 3   | 5   | 11  | 7   | 9   | 8   | 10  | 5   | 6   | 4   | 4   | 6              | 12    | 11-12 |
| Cape Columbine.....                   | 1900          | 7   | 10  | 15  | 12  | 12  | 13  | 5   | 5   | 4   | 4   | 5   | 7   | 8              | 12    | 11-12 |
| Cape Saint Lucia.....                 | 2000          | 5   | 4   | 4   | 7   | 1   | 5   | 7   | 3   | 7   | 10  | 6   | 5   | 5              | 11    | 10-11 |
| Cape Town/D.F. Malan.....             | 1900          | 4   | 4   | 7   | 9   | 14  | 20  | 15  | 11  | 6   | 4   | 4   | 3   | 8              | 11-12 | 11-12 |
| De Aar.....                           | 2000          | 2   | 3   | 5   | 6   | 8   | 12  | 4   | 2   | 2   | 2   | 4   | 3   | 4              | 10-11 | 10-11 |
| Durban/Louis Botha.....               | 2000          | 15  | 12  | 12  | 12  | 14  | 22  | 24  | 17  | 13  | 15  | 15  | 11  | 15             | 11-12 | 11-12 |
| East London.....                      | 2000          | 12  | 5   | 14  | 7   | 4   | 3   | 3   | 5   | 10  | 13  | 10  | 10  | 5              | 11-12 | 10-12 |
| Eatcourt.....                         | 2000          | 14  | 16  | 11  | 6   | 3   | 5   | 4   | 4   | 6   | 11  | 13  | 16  | 9              | 11    | 11    |
| Johannesburg/Jan Smuts.....           | 2000          | 6   | 7   | 6   | 6   | 11  | 19  | 19  | 9   | 5   | 5   | 6   | 5   | 9              | 12    | 12    |
| Kimberley.....                        | 2000          | 3   | 1   | 2   | 2   | 3   | 4   | 10  | 4   | 1   | 2   | 4   | 2   | 3              | 12    | 12    |
| Kuruman.....                          | 2000          | 3   | 3   | 1   | 1   | *   | *   | *   | 0   | 1   | 2   | 2   | 2   | 1              | 9-11  | 9-11  |
| Lydenburg.....                        | 2000          | 4   | 1   | 1   | 1   | 1   | 1   | 0   | 4   | 2   | 5   | 4   | 2   | 2              | 8-9   | 8-9   |
| Macouville.....                       | 2000          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 1   | 0   | *              | 2-3   | 2-3   |
| Mafeking.....                         | 2000          | 4   | 4   | 2   | 2   | 0   | *   | 1   | 3   | 6   | 7   | 4   | 3   | 3              | 9-10  | 9-10  |
| Marnitz.....                          | 2000          | 13  | 16  | 13  | 14  | 10  | 12  | 12  | 16  | 23  | 22  | 18  | 15  | 15             | 11-12 | 10-12 |
| Matroosberg.....                      | 1900          | 4   | 2   | 5   | 6   | 5   | 6   | 5   | 7   | 3   | 3   | 3   | 3   | 4              | 10-11 | 10-11 |
| Middelburg.....                       | 2000          | 2   | 2   | 4   | 2   | 1   | 1   | 1   | 1   | 1   | 1   | 2   | 2   | 2              | 10-11 | 10-11 |
| Okiep.....                            | 1900          | *   | 0   | 0   | 1   | 1   | 3   | 2   | 3   | 1   | 1   | 1   | *   | 1              | 12-13 | 12-13 |
| Phalaborwa.....                       | 2000          | 2   | *   | 0   | *   | 0   | 0   | *   | *   | 0   | 0   | 1   | 0   | *              | 9-10  | 9-10  |

Footnote at end of table.

FIGURE 43. FREQUENCY OF VISIBILITY &lt; 6 MILES (Continued)

| COUNTRY AND STATION                   | HOUR<br>(LST) |     |     |     |     |     |     |     |     |     |     |     |     | DATA BASE INFO |       |       |
|---------------------------------------|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|-------|-------|
|                                       |               | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANN            | FOR   | CVR   |
| Republic of South Africa (Continued): |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |
| Pietersburg.....                      | 2000          | 1   | 2   | 0   | 1   | *   | 3   | 1   | *   | 1   | 3   | 1   | 3   | 1              | 12    | 11-12 |
| Piet Retief.....                      | 2000          | 33  | 31  | 30  | 25  | 12  | 15  | 21  | 25  | 31  | 33  | 36  | 33  | 27             | 10-12 | 10-11 |
| Port Elizabeth.....                   | 2000          | 5   | 4   | 5   | 4   | 4   | 6   | 5   | 7   | 5   | 5   | 5   | 3   | 5              | 12    | 12    |
| Port Saint Johns.....                 | 2000          | 23  | 24  | 21  | 12  | 6   | 4   | 4   | 9   | 16  | 18  | 20  | 19  | 15             | 12    | 10-12 |
| Queenstown.....                       | 2000          | 9   | 4   | 8   | 7   | 4   | 6   | 5   | 4   | 5   | 7   | 9   | 4   | 6              | 8-9   | 8-9   |
| Sheeprun.....                         | 2000          | 22  | 18  | 14  | 11  | 3   | 2   | 2   | 4   | 3   | 16  | 16  | 11  | 10             | 5-9   | 5-6   |
| Uppington.....                        | 1900          | 2   | 1   | 1   | *   | 0   | 2   | 1   | 1   | 1   | 1   | 2   | 3   | 1              | 12    | 12    |
| Wepener.....                          | 2000          | 17  | 17  | 24  | 22  | 16  | 15  | 15  | 15  | 21  | 22  | 23  | 23  | 19             | 12-13 | 12-13 |
| Willowmore.....                       | 2000          | 0   | 0   | *   | 0   | *   | 0   | 1   | 0   | *   | 1   | *   | 0   | *              | 5-9   | 7-9   |
| South-West Africa:                    |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |
| Globabis.....                         | 1900          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0              | 8     | 8     |
| Keetmanshoop.....                     | 1900          | 1   | *   | 1   | *   | 0   | 0   | 0   | 0   | *   | 0   | 1   | 1   | *              | 9-10  | 9-10  |
| Mariental.....                        | 1900          | 3   | 2   | 2   | 2   | *   | *   | 0   | 0   | 0   | *   | 1   | 2   | 1              | 8     | 7-8   |
| Outjo.....                            | 1900          | 2   | 2   | 0   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 2   | 2   | 1              | 8     | 8     |
| Windhoek.....                         | 1900          | 5   | 6   | 4   | 1   | 0   | 0   | 0   | 1   | 1   | *   | 1   | 0   | 2              | 8     | 8     |

\* &lt; 0.5%.



FIGURE 44. PERCENTAGE FREQUENCY OF VISIBILITY <2 1/2 MILES AT SPECIFIED HOURS

| COUNTRY AND STATION         | HOUR<br>(LST) |     |     |     |     |     |     |     |     |     |     |     |     | DATA BASE INFO |       |       |
|-----------------------------|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|-------|-------|
|                             |               | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANN            | FOR   | CTR   |
| Botswana:                   |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |
| Francistown.....            | 0800          | 0   | 0   | 1   | 0   | 0   | 1   | 0   | 1   | 0   | 0   | 1   | 1   | *              | 6     | 6     |
| Gaborone.....               | 0800          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | *   | 0   | *              | 7     | 6-7   |
| Ghanzi.....                 | 0700          | 0   | 0   | 0   | 0   | 1   | 0   | 0   | 0   | 1   | 0   | 0   | 0   | *              | 6     | 6     |
| Maun.....                   | 0800          | 0   | 0   | 1   | 0   | *   | 0   | 0   | 1   | 4   | 3   | 1   | 1   | 1              | 9     | 9     |
| Shakawe.....                | 0700          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0              | 5     | 5     |
| Tsabong.....                | 0700          | 0   | 0   | 0   | 1   | 0   | *   | 1   | 0   | 0   | 0   | 0   | 0   | *              | 6-7   | 6-7   |
| Tsane.....                  | 0700          | 1   | 0   | 0   | 0   | 0   | 2   | 0   | 0   | 0   | 0   | 0   | 0   | *              | 6     | 6     |
| Republic of South Africa:   |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |
| Alexander Bay.....          | 0700          | 4   | 11  | 20  | 18  | 24  | 18  | 17  | 16  | 16  | 4   | 2   | 2   | 12             | 12    | 12    |
| Beaufort West.....          | 0800          | 0   | 2   | 3   | 4   | 3   | 4   | 4   | 3   | 3   | 1   | 2   | 0   | 2              | 11-12 | 11-12 |
| Bethlehem.....              | 0800          | 2   | 3   | 11  | 14  | 17  | 14  | 16  | 16  | 13  | 3   | 5   | 2   | 10             | 10-11 | 10-11 |
| Calviula.....               | 0700          | *   | 3   | 3   | 4   | 2   | 4   | 4   | 3   | 4   | 2   | *   | 0   | 2              | 12    | 12    |
| Cape Agulhas.....           | 0700          | 1   | 3   | 5   | 5   | 4   | 3   | 3   | 3   | 2   | 2   | 3   | 2   | 3              | 12    | 12    |
| Cape Columbine.....         | 0700          | 19  | 19  | 27  | 20  | 18  | 13  | 11  | 6   | 8   | 9   | 13  | 16  | 15             | 12    | 12    |
| Cape Saint Lucia.....       | 0800          | 2   | 4   | 3   | 5   | 2   | 3   | 6   | 2   | 5   | 5   | 3   | 2   | 4              | 11    | 11    |
| Cape Town/D.F. Malan.....   | 0700          | 2   | 5   | 7   | 10  | 11  | 13  | 10  | 6   | 4   | 5   | 5   | 1   | 7              | 11-12 | 11-12 |
| De Aar.....                 | 0800          | *   | 1   | 4   | 9   | 15  | 21  | 17  | 15  | 5   | 1   | 0   | 1   | 8              | 10-11 | 10-11 |
| Durban/Louis Botha.....     | 0800          | 3   | 2   | 2   | 3   | 3   | 7   | 9   | 9   | 6   | 3   | 3   | 5   | 5              | 11-12 | 11-12 |
| East London.....            | 0800          | 7   | 6   | 7   | 8   | 2   | 1   | 1   | 1   | 5   | 6   | 6   | 6   | 4              | 12    | 12    |
| Katseourt.....              | 0800          | 1   | 3   | 3   | 4   | 5   | 4   | 3   | 4   | 2   | 1   | 3   | 1   | 3              | 11    | 11    |
| Johannesburg/Jan Smuts..... | 0800          | 4   | 3   | 4   | 10  | 12  | 11  | 10  | 9   | 4   | 4   | 3   | 4   | 7              | 12    | 12    |
| Kimberley.....              | 0800          | *   | *   | 2   | 2   | 3   | 4   | 2   | 5   | 1   | 0   | 1   | *   | 2              | 12    | 12    |
| Kuruman.....                | 0800          | 0   | *   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | *   | 0   | *              | 9-11  | 9-11  |
| Londenburg.....             | 0800          | 1   | 0   | 0   | 1   | 1   | 1   | 0   | 0   | 0   | 1   | 2   | 0   | *              | 5-6   | 5-6   |
| Macouville.....             | 0800          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0              | 2-3   | 2-3   |
| Mafeking.....               | 0800          | *   | 1   | 1   | 1   | 1   | *   | 1   | 5   | 3   | 4   | 1   | *   | 2              | 9-10  | 9-10  |
| Marrits.....                | 0800          | 0   | 5   | 1   | 2   | 2   | 6   | 5   | 2   | 3   | 1   | *   | 1   | 2              | 11-12 | 10-12 |
| Matroosberg.....            | 0700          | *   | 1   | 1   | 4   | 3   | 2   | 3   | 4   | 3   | 1   | *   | *   | 2              | 10-11 | 10-11 |
| Middelburg.....             | 0800          | 0   | 1   | 1   | 2   | 1   | 2   | 1   | 1   | *   | *   | *   | *   | 1              | 11    | 10-11 |
| Okiep.....                  | 0700          | *   | 0   | 1   | 1   | 2   | 3   | 2   | 5   | 2   | 1   | *   | 0   | 1              | 12-13 | 12-13 |
| Phalaborwa.....             | 0800          | 1   | 2   | 0   | 1   | *   | 1   | *   | 1   | 0   | *   | 2   | 0   | 1              | 9-10  | 9-10  |
| Pietersburg.....            | 0800          | 0   | *   | *   | 1   | 4   | 8   | 4   | 3   | 1   | 1   | 0   | *   | 2              | 12    | 12    |
| Piet Retief.....            | 0800          | 14  | 18  | 23  | 20  | 12  | 14  | 19  | 21  | 24  | 20  | 19  | 14  | 18             | 10-12 | 10-12 |
| Port Elizabeth.....         | 0800          | 3   | 3   | 6   | 5   | 0   | 0   | 7   | 8   | 0   | 4   | 3   | 1   | 5              | 12    | 12    |
| Port Saint Johns.....       | 0800          | 3   | 4   | 1   | 2   | 1   | 1   | 1   | 1   | 2   | 3   | 4   | 4   | 2              | 12    | 12    |
| Queenstown.....             | 0800          | 5   | 9   | 9   | 14  | 13  | 15  | 16  | 13  | 10  | 5   | 4   | 3   | 10             | 9-11  | 9-11  |
| Rheepun.....                | 0800          | 5   | 4   | 5   | 8   | 3   | 7   | 6   | 6   | 0   | 5   | 7   | 2   | 5              | 5-6   | 5-6   |
| Uplington.....              | 0700          | 0   | 0   | 0   | *   | 0   | *   | 1   | *   | 1   | 0   | *   | 0   | *              | 12    | 12    |
| Wepener.....                | 0800          | *   | 3   | 1   | 5   | 8   | 25  | 29  | 10  | 2   | *   | 1   | *   | 7              | 12-13 | 12-13 |
| Willowmore.....             | 0800          | 0   | 1   | 4   | 4   | 6   | 1   | 3   | 3   | 1   | *   | 0   | 0   | 2              | 8-9   | 8-9   |
| South-West Africa:          |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |
| Globaba.....                | 0700          | 0   | 0   | 0   | 0   | *   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | *              | 8     | 8     |
| Koetmanshoop.....           | 0700          | 0   | 0   | 0   | 0   | *   | 1   | 0   | *   | 0   | *   | 0   | 0   | *              | 9-10  | 9-10  |
| Mariental.....              | 0700          | 0   | 0   | 0   | *   | 1   | 0   | 0   | 0   | 0   | *   | 0   | 0   | *              | 8     | 8     |
| Outjo.....                  | 0700          | *   | 1   | *   | 0   | 0   | 0   | *   | 0   | *   | 0   | *   | 0   | *              | 8     | 8     |
| Windhoek.....               | 0700          | 0   | 1   | 1   | 0   | 0   | 0   | *   | 0   | 0   | 0   | 0   | 0   | *              | 9-10  | 9-10  |

\* < 0.5%.

FIGURE 45. MEAN NUMBER OF DAYS WITH FOG (VISIBILITY &lt; 2 1/2 MILES) AT SPECIFIED HOURS

| COUNTRY AND STATION         | HOUR<br>(LST) |     |     |     |     |     |     |     |     |     |     |     |     | DATA BASE INFO |       |       |
|-----------------------------|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|-------|-------|
|                             |               | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANN            | FOR   | CV 1  |
| Botswana:                   |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |
| Francistown.....            | 0800          | 0   | 0   | 0   | 0   | 0   | *   | 0   | *   | 0   | 0   | 0   | 0   | *              | 6     | 0     |
| Gaborone.....               | 0800          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0              | 7     | 7     |
| Ghanzi.....                 | 0700          | 0   | 0   | 0   | 0   | *   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | *              | 6     | 6     |
| Maun.....                   | 0800          | 0   | 0   | *   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | *              | 9     | 9     |
| Shakawe.....                | 0700          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0              | 8     | 8     |
| Tsaberong.....              | 0700          | 0   | 0   | 0   | *   | 0   | *   | *   | 0   | 0   | 0   | 0   | 0   | 1              | 6-7   | 6-7   |
| Tsane.....                  | 0700          | *   | 0   | 0   | 0   | 0   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 1              | 6     | 6     |
| Republic of South Africa:   |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |
| Alexander Bay.....          | 0700          | *   | 2   | 5   | 4   | 6   | 4   | 4   | 3   | 3   | *   | *   | *   | 33             | 12    | 12    |
| Beaufort West.....          | 0800          | 0   | *   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | *   | *   | 0   | 7              | 11-12 | 11-12 |
| Bethlehem.....              | 0800          | 0   | *   | 1   | 3   | 4   | 3   | 3   | 2   | *   | 0   | *   | 0   | 17             | 10-11 | 10-11 |
| Calvinia.....               | 0700          | *   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | *   | 0   | 7              | 12    | 12    |
| Cape Agulhas.....           | 0700          | *   | *   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | *   | 1   | *   | 7              | 12    | 12    |
| Cape Columbine.....         | 0700          | 6   | 8   | 8   | 6   | 5   | 3   | 3   | 2   | 2   | 3   | 4   | 5   | 50             | 12    | 12    |
| Cape Saint Lucia.....       | 0800          | 0   | 0   | 0   | *   | *   | *   | *   | *   | *   | *   | 0   | 0   | 1              | 11    | 11    |
| Cape Town/D.F. Malan.....   | 0700          | *   | 1   | 2   | 2   | 3   | 3   | 3   | 1   | 1   | 1   | *   | *   | 16             | 11-12 | 11-12 |
| De Aar.....                 | 0800          | 0   | 0   | *   | *   | *   | 1   | *   | *   | 0   | *   | 0   | 0   | 2              | 10-11 | 10-11 |
| Durban/Louis Botha.....     | 0800          | 0   | 0   | 0   | 0   | 0   | *   | 0   | 0   | *   | 0   | 0   | 0   | *              | 11-12 | 11-12 |
| East London.....            | 0800          | *   | *   | *   | *   | *   | *   | *   | *   | *   | *   | *   | *   | 2              | 12    | 12    |
| Estcourt.....               | 0800          | 0   | *   | *   | 1   | 1   | 1   | 1   | *   | *   | *   | *   | *   | 8              | 11    | 11    |
| Johannesburg/Jan Smuts..... | 0800          | 1   | *   | 1   | 2   | 2   | 2   | 1   | 1   | 1   | *   | *   | *   | 11             | 12    | 12    |
| Kimberley.....              | 0800          | 0   | 0   | *   | *   | *   | *   | *   | *   | 0   | 0   | 0   | 0   | 1              | 12    | 12    |
| Kuruman.....                | 0800          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0              | 9-11  | 9-11  |
| Lydenburg.....              | 0800          | 0   | 0   | 0   | *   | *   | 0   | 0   | 0   | 0   | *   | *   | 0   | 1              | 8-8   | 8-8   |
| Macouville.....             | 0800          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0              | 2-3   | 2-3   |
| Mafeking.....               | 0800          | 0   | 0   | 0   | *   | *   | *   | 0   | 0   | 0   | *   | 0   | 0   | *              | 9-10  | 9-10  |
| Marrissa.....               | 0800          | 0   | 0   | 0   | 0   | *   | 0   | *   | 0   | 0   | 0   | 0   | 0   | *              | 11-12 | 10-12 |
| Matroosberg.....            | 0700          | 0   | *   | *   | 1   | 1   | 1   | 1   | 1   | *   | *   | *   | 0   | 5              | 10-11 | 10-11 |
| Middelburg.....             | 0300          | 0   | *   | 0   | *   | *   | 1   | *   | *   | *   | *   | 0   | 0   | 2              | 11    | 10-11 |
| (O)kiep.....                | 0700          | *   | 0   | *   | *   | *   | 1   | *   | 1   | 1   | *   | *   | 0   | 3              | 12-13 | 12-13 |
| Phalaborwa.....             | 0800          | 0   | 0   | 0   | *   | *   | *   | *   | 0   | 0   | 0   | *   | 0   | 1              | 10    | 10    |
| Pieteraburg.....            | 0800          | 0   | 0   | 0   | *   | 1   | 1   | 1   | 1   | *   | 0   | 0   | 0   | 4              | 12    | 12    |
| Piet Retief.....            | 0800          | 1   | 1   | 2   | 2   | 2   | 1   | *   | 2   | 2   | 2   | 2   | 1   | 18             | 11-12 | 10-12 |
| Port Elizabeth.....         | 0800          | *   | *   | 1   | 1   | *   | *   | 1   | 1   | *   | *   | *   | *   | 8              | 12    | 12    |
| Port Saint Johns.....       | 0800          | 0   | 0   | *   | 0   | 0   | 0   | 0   | 0   | *   | *   | 0   | *   | *              | 12    | 12    |
| Queenstown.....             | 0800          | *   | 1   | 1   | 2   | 2   | 2   | 1   | 1   | 1   | *   | *   | *   | 10             | 9-11  | 9-11  |
| Rheepun.....                | 0800          | *   | 1   | 1   | 2   | 1   | 1   | 2   | 1   | 1   | 1   | 1   | *   | 10             | 8-8   | 8-8   |
| Uppington.....              | 0700          | 0   | 0   | 0   | *   | 0   | *   | *   | *   | *   | 0   | 0   | 0   | *              | 12    | 11-12 |
| Wepener.....                | 0800          | *   | *   | *   | 1   | 2   | 4   | 3   | 2   | *   | *   | *   | 0   | 13             | 12-13 | 12-13 |
| Willowmore.....             | 0800          | 0   | *   | 1   | 1   | 1   | 1   | 1   | 1   | *   | *   | 0   | 0   | 6              | 8-9   | 8-9   |
| South-West Africa:          |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |
| Gobabis.....                | 0700          | 0   | 0   | 0   | 0   | *   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | *              | 8     | 8     |
| Keetmanshoop.....           | 0700          | 0   | 0   | 0   | 0   | *   | *   | 0   | *   | 0   | *   | 0   | 0   | 1              | 9-10  | 9-10  |
| Mariental.....              | 0700          | 0   | 0   | 0   | *   | *   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | *              | 8     | 8     |
| Outjo.....                  | 0700          | 0   | *   | 0   | 0   | 0   | 0   | 0   | 0   | *   | 0   | 0   | 0   | *              | 8     | 8     |
| Windhoek.....               | 0700          | 0   | *   | *   | 0   | 0   | 0   | *   | 0   | 0   | 0   | 0   | 0   | *              | 9-10  | 9-10  |

\* &lt; 0.5 day.

FIGURE 46. MEAN NUMBER OF DAYS WITH HAZE AND/OR SMOKE  
(Based on days with 3 observations)

| COUNTRY AND STATION         |     |     |     |     |     |     |     |     |     |     |     |     | DATA BASE INFO |       |       |
|-----------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|-------|-------|
|                             | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANN            | FOR   | CYR   |
| Botswana:                   |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |
| Francistown.....            | *   | 0   | 0   | 1   | 1   | 4   | 5   | 5   | 6   | 3   | *   | 0   | 39             | 6     | 6     |
| Gaborone.....               | 1   | *   | *   | *   | 3   | 5   | 7   | 5   | 5   | 2   | *   | 0   | 27             | 6-7   | 6-7   |
| Ghanzi.....                 | *   | 0   | 0   | 0   | *   | 2   | 1   | 4   | 2   | *   | *   | *   | 9              | 5-6   | 5-6   |
| Maun.....                   | 1   | 1   | 2   | 3   | 10  | 16  | 17  | 18  | 21  | 17  | 4   | 1   | 110            | 9     | 8-9   |
| Shakawe.....                | 1   | *   | 0   | 1   | 2   | 5   | 5   | 5   | 5   | 2   | 0   | 0   | 34             | 5     | 5     |
| Tsabong.....                | *   | 2   | 2   | 2   | 2   | 3   | 1   | 2   | 3   | 2   | *   | 1   | 21             | 6-7   | 6-7   |
| Tsane.....                  | *   | 0   | *   | *   | *   | 1   | 1   | 2   | 1   | 1   | 0   | *   | 6              | 6     | 6     |
| Republic of South Africa:   |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |
| Alexander Bay.....          | 17  | 12  | 13  | 12  | 10  | 9   | 10  | 15  | 15  | 16  | 14  | 14  | 156            | 10-11 | 10-11 |
| Beaufort West.....          | 4   | 4   | 1   | 2   | 4   | 5   | 9   | 9   | 5   | 5   | 4   | 3   | 57             | 11-12 | 10-12 |
| Bethlehem.....              | 6   | 6   | 10  | 8   | 9   | 9   | 11  | 14  | 12  | 11  | 7   | 6   | 111            | 10-11 | 10-11 |
| Calvinia.....               | 2   | *   | *   | *   | *   | 1   | 2   | 2   | 2   | 1   | 1   | 1   | 12             | 11-12 | 10-12 |
| Cape Agulhas.....           | 1   | 1   | 1   | 2   | 2   | 1   | 2   | 1   | 1   | 1   | *   | 1   | 12             | 12    | 11-12 |
| Cape Columbine.....         | 3   | 4   | 3   | 2   | 1   | 1   | 2   | 2   | 1   | 1   | 2   | 2   | 24             | 12    | 12    |
| Cape Saint Louis.....       | 1   | 1   | 1   | 1   | 1   | 2   | 3   | 3   | 4   | 2   | 1   | *   | 19             | 11    | 10-11 |
| Cape Town/D.F. Malan.....   | 20  | 17  | 15  | 14  | 14  | 16  | 15  | 16  | 16  | 16  | 18  | 20  | 301            | 11-12 | 11-12 |
| De Aar.....                 | 2   | 3   | 6   | 10  | 17  | 19  | 20  | 18  | 10  | 4   | 2   | 1   | 111            | 10-11 | 10-11 |
| Durban/Louis Botha.....     | 15  | 17  | 21  | 22  | 25  | 25  | 25  | 25  | 22  | 18  | 13  | 12  | 240            | 11-12 | 11-12 |
| East London.....            | 10  | 8   | 11  | 10  | 11  | 12  | 15  | 15  | 13  | 13  | 9   | 9   | 137            | 11-12 | 10-12 |
| Katcourt.....               | 16  | 17  | 24  | 23  | 25  | 25  | 29  | 29  | 25  | 20  | 16  | 15  | 270            | 11    | 11    |
| Johannesburg/Jan Smuts..... | 20  | 22  | 25  | 25  | 29  | 29  | 30  | 30  | 27  | 25  | 21  | 21  | 303            | 12    | 12    |
| Kimberley.....              | 8   | 9   | 12  | 14  | 22  | 22  | 25  | 25  | 22  | 14  | 8   | 6   | 155            | 12    | 12    |
| Kuruman.....                | *   | *   | *   | 1   | 1   | 3   | 3   | 4   | 4   | 3   | *   | *   | 20             | 9-11  | 9-11  |
| Lydenburg.....              | 1   | 2   | 1   | 0   | 0   | 0   | 1   | 2   | 1   | 0   | 0   | 0   | 7              | 5-6   | 5-6   |
| Macouville.....             | 0   | 0   | 0   | 0   | 0   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 1              | 2-3   | 2-3   |
| Mafeking.....               | 4   | 4   | 8   | 8   | 16  | 16  | 20  | 19  | 15  | 9   | 3   | 3   | 125            | 9-10  | 9-10  |
| Marnitz.....                | *   | *   | 1   | 1   | 4   | 5   | 8   | 10  | 9   | 4   | *   | *   | 43             | 11-12 | 10-11 |
| Matroosberg.....            | 1   | 1   | *   | *   | *   | *   | 1   | 3   | 1   | *   | *   | 1   | 8              | 10-11 | 10-11 |
| Middelburg.....             | 2   | 2   | 2   | 1   | 1   | 1   | 2   | 3   | 5   | 3   | 1   | 3   | 26             | 10-11 | 10-11 |
| Okiep.....                  | 1   | *   | 0   | *   | *   | 1   | 1   | 2   | 1   | 1   | *   | 1   | 7              | 12-13 | 11-13 |
| Phalaborwa.....             | 1   | 1   | 3   | 2   | 3   | 7   | 6   | 5   | 7   | 6   | 3   | 1   | 44             | 9-10  | 9-10  |
| Pietersburg.....            | 1   | 3   | 7   | 11  | 20  | 21  | 24  | 23  | 19  | 11  | 6   | 5   | 149            | 12    | 12    |
| Piet Retief.....            | *   | 1   | 3   | *   | *   | *   | *   | *   | 1   | 1   | *   | *   | 7              | 11-12 | 10-12 |
| Port Elizabeth.....         | 8   | 6   | 7   | 8   | 10  | 12  | 14  | 13  | 11  | 9   | 7   | 6   | 111            | 12    | 12    |
| Port Saint John.....        | 0   | 5   | 7   | 5   | 4   | 4   | 7   | 5   | 7   | 0   | 5   | 4   | 65             | 12    | 11-12 |
| Queenstown.....             | 4   | 6   | 7   | 9   | 10  | 11  | 11  | 12  | 11  | 7   | 5   | 4   | 95             | 8-9   | 8-9   |
| Sheeprun.....               | 1   | *   | 2   | 1   | 0   | *   | 3   | 5   | 2   | 3   | *   | *   | 17             | 5-6   | 5-6   |
| Uppington.....              | 3   | 4   | 4   | 5   | 9   | 11  | 10  | 12  | 13  | 6   | 4   | 4   | 55             | 12    | 11-12 |
| Wepener.....                | *   | 0   | 1   | 0   | 0   | 0   | 1   | *   | *   | *   | *   | 2   | 5              | 12-13 | 11-13 |
| Willowmore.....             | 1   | *   | 1   | 0   | 0   | 0   | 0   | 1   | *   | *   | *   | *   | 3              | 8-9   | 7-9   |
| South-West Africa:          |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |
| Globabla.....               | 0   | 0   | 0   | 0   | 0   | 0   | *   | 0   | 0   | 0   | 0   | *   | *              | 8     | 8     |
| Keetmanshoop.....           | 21  | 18  | 21  | 16  | 15  | 15  | 21  | 23  | 19  | 21  | 22  | 25  | 240            | 9-10  | 9-10  |
| Mariental.....              | 4   | 2   | 2   | 3   | 2   | 4   | 5   | 9   | 7   | 3   | 0   | 2   | 40             | 8     | 8     |
| Outjo.....                  | *   | *   | *   | *   | 0   | 1   | 1   | 4   | 3   | *   | *   | *   | 10             | 8     | 8     |
| Windhoek.....               | 3   | 2   | 3   | 4   | 4   | 7   | 11  | 14  | 11  | 5   | 3   | 4   | 70             | 8     | 8     |

\* < 0.5 day.

FIGURE 47. DIRECTION, MEAN SPEED (KNOTS) AND PERCENTAGE FREQUENCY OF PREVAILING SURFACE WIND AT SPECIFIED HOURS  
(Prevailing wind is the wind that occurs most often. Calm indicates wind speed < 1 knot.)

| COUNTRY AND STATIONS | MOON<br>(LAT) | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  | OCT  | NOV  | DEC  | DATA BASE INFO |     |
|----------------------|---------------|------|------|------|------|------|------|------|------|------|------|------|------|----------------|-----|
|                      |               |      |      |      |      |      |      |      |      |      |      |      |      | FOR            | CYE |
| Bahrain<br>Franktown | 0000          | E/10 | E/10 | E/10 | E/9  | calm | calm | calm | calm | E/12 | E/12 | E/11 | E/11 | 6              | 9   |
|                      | 1000          | 30   | 40   | 43   | 33   | 41   | 33   | 31   | 47   | 43   | 46   | 26   | 43   | 6              | 6   |
|                      | 1400          | E/10 | E/11 | E/10 | E/11 | E/9  | E/10 | E/12 | E/11 | E/12 | E/11 | E/10 | E/10 | 6              | 6   |
|                      | 2000          | 30   | 34   | 42   | 29   | 29   | 22   | 30   | 35   | 47   | 29   | 30   | 33   | 6              | 6   |
| Cabo Verde           | 0000          | 45   | 37   | 48   | calm | calm | calm | calm | calm | E/8  | E/10 | E/9  | calm | 6              | 6   |
|                      | 0600          | NE/7 | NE/8 | NE/7 | calm | calm | calm | calm | calm | calm | 41   | 38   | 37   | 7              | 7   |
|                      | 1000          | SE/7 | NE/7 | 31   | 46   | 38   | 63   | 65   | 48   | 32   | 35   | 29   | 37   | 6-7            | 6-7 |
|                      | 2000          | 31   | 31   | 24   | N/6  | calm | N/6  | NE/8 | NE/9 | NE/8 | NE/9 | NE/8 | NE/7 | 6-7            | 6-7 |
| Changi               | 0000          | calm | calm | calm | calm | calm | calm | calm | calm | calm | calm | calm | calm | 6              | 6   |
|                      | 0700          | calm | calm | E/8  | calm | calm | calm | calm | calm | 72   | 57   | 62   | 66   | 6              | 6   |
|                      | 1300          | 24   | 25   | 25   | 25   | 46   | 52   | 54   | 40   | 25   | 26   | 24   | 26   | 6              | 6   |
|                      | 1900          | 29   | 34   | 35   | 23   | 20   | 27   | 21   | 20   | 33   | 25   | 23   | 35   | 5-6            | 5-6 |
| Mara                 | 0000          | calm | calm | calm | calm | calm | calm | calm | calm | calm | calm | calm | calm | 9              | 9   |
|                      | 0600          | calm | calm | calm | calm | calm | calm | calm | calm | calm | calm | calm | calm | 9              | 9   |
|                      | 1400          | calm | calm | calm | calm | calm | calm | calm | calm | calm | calm | calm | calm | 9              | 9   |
|                      | 2000          | calm | calm | calm | calm | calm | calm | calm | calm | calm | calm | calm | calm | 9              | 9   |
| Shikave              | 0700          | calm | calm | calm | calm | calm | calm | calm | calm | calm | calm | calm | calm | 5              | 5   |
|                      | 1300          | 47   | 52   | 43   | 43   | 67   | 65   | 72   | 67   | 60   | 26   | 30   | 34   | 5              | 5   |
|                      | 1900          | 28   | 34   | 36   | 40   | 36   | 30   | 34   | 37   | 30   | 29   | 23   | 23   | 5              | 5   |
|                      | 0700          | calm | calm | calm | calm | calm | calm | calm | calm | calm | calm | calm | calm | 5              | 5   |
| Tambora              | 0700          | N/7  | N/7  | N/5  | calm | calm | calm | calm | calm | calm | calm | calm | calm | 6-7            | 6-7 |
|                      | 1300          | 37   | 34   | 37   | 40   | 70   | 74   | 66   | 40   | 34   | 28   | 35   | 38   | 6-7            | 6-7 |
|                      | 1900          | 39   | N/6  | N/7  | N/7  | N/7  | N/8  | N/9  | N/10 | N/10 | N/11 | N/9  | N/8  | 6-7            | 6-7 |
|                      | 0700          | calm | calm | calm | calm | calm | calm | calm | calm | calm | calm | calm | calm | 6              | 6   |
| Tanna                | 0700          | N/6  | NE/9 | calm | calm | calm | calm | calm | calm | calm | calm | calm | calm | 6              | 6   |
|                      | 1300          | 25   | 27   | 32   | 37   | 55   | 66   | 63   | 47   | 27   | 19   | 23   | 24   | 6              | 6   |
|                      | 1900          | 19   | NE/7 | N/7  | N/7  | N/8  | N/8  | N/9  | N/10 | N/12 | N/8  | NE/8 | N/9  | 6              | 6   |
|                      | 0700          | calm | calm | calm | calm | calm | calm | calm | calm | calm | calm | calm | calm | 6              | 6   |

[illegible]

FIGURE 47. DIRECTION, MEAN SPEED AND FREQUENCY OF PREVAILING SURFACE WIND (Continued)

| COUNTRY AND STATION                      | MOON<br>(LAT) | DATA BASE INFO |             |             |             |             |             |             |             |             |             |             |             |       |       |
|--|---------------|----------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------|-------|
|  |               | JAN            | FEB         | MAR         | APR         | MAY         | JUN         | JUL         | AUG         | SEP         | OCT         | NOV         | DEC         | POB   | CYE   |
| Republic of South Africa<br>(Continued): |               |                |             |             |             |             |             |             |             |             |             |             |             |       |       |
| 1° Afr.....                              | 0000          | SE/9<br>32     | S/7<br>25   | NW/10<br>31 | NW/10<br>30 | NW/10<br>34 | NW/10<br>34 | NW/11<br>35 | NW/13<br>36 | NW/12<br>36 | NW/13<br>33 | NW/11<br>31 | NW/10<br>27 | 10-11 | 10-11 |
|  | 1000          | W/10<br>24     | calm<br>31  | calm<br>31  | calm<br>30  | calm<br>34  | calm<br>34  | calm<br>35  | calm<br>36  | calm<br>36  | calm<br>33  | W/8<br>28   | W/8<br>27   | 10-11 | 10-11 |
|  | 2000          | W/9<br>21      | 23          | 30          | 44          | 50          | 50          | 64          | 43          | 34          | 21          | 26          | 22          | 10-11 | 10-11 |
| Durban/Louis Botha.....                  | 0000          | calm<br>22     | calm<br>27  | calm<br>35  | calm<br>30  | calm<br>30  | calm<br>30  | calm<br>30  | calm<br>30  | calm<br>30  | calm<br>30  | S/11<br>25  | calm<br>25  | 11-12 | 11-12 |
|  | 1000          | S/14<br>33     | S/13<br>34  | S/13<br>31  | S/14<br>32  | S/13<br>30  | S/13<br>32  | S/12<br>32  | S/16<br>32  | S/15<br>38  | S/14<br>35  | S/13<br>30  | S/15<br>37  | 11-12 | 11-12 |
|  | 2000          | calm<br>22     | calm<br>31  | calm<br>37  | calm<br>47  | calm<br>42  | calm<br>42  | calm<br>42  | calm<br>42  | calm<br>42  | calm<br>42  | calm<br>42  | calm<br>42  | 11-12 | 11-12 |
| East London.....                         | 0000          | W/11<br>27     | W/11<br>24  | W/10<br>25  | W/11<br>44  | W/12<br>43  | W/12<br>43  | W/11<br>44  | W/11<br>40  | W/11<br>46  | W/12<br>41  | W/12<br>41  | W/12<br>41  | 12    | 12    |
|  | 1000          | E/17<br>45     | E/17<br>41  | E/14<br>41  | S/11<br>32  | S/10<br>26  | S/10<br>26  | S/9<br>27   | S/12<br>29  | S/13<br>25  | S/17<br>25  | E/16<br>42  | E/16<br>42  | 12    | 12    |
|  | 2000          | E/11<br>31     | E/11<br>22  | W/9<br>23   | W/11<br>34  | W/10<br>40  | W/10<br>42  | W/10<br>35  | W/11<br>30  | W/10<br>26  | W/11<br>22  | W/11<br>24  | E/11<br>24  | 11-12 | 10-12 |
| Eastport.....                            | 0000          | calm<br>77     | calm<br>82  | calm<br>80  | calm<br>77  | calm<br>72  | calm<br>70  | calm<br>74  | calm<br>75  | calm<br>75  | calm<br>74  | calm<br>70  | calm<br>73  | 11    | 11    |
|  | 1000          | calm<br>25     | calm<br>25  | calm<br>24  | calm<br>29  | calm<br>36  | calm<br>40  | calm<br>32  | N/5<br>25   | N/6<br>27   | N/7<br>22   | calm<br>24  | calm<br>25  | 11    | 11    |
|  | 2000          | calm<br>43     | calm<br>43  | calm<br>50  | calm<br>60  | calm<br>76  | calm<br>81  | calm<br>75  | calm<br>65  | calm<br>53  | calm<br>44  | calm<br>42  | calm<br>36  | 11    | 11    |
| Johannesburg/Jac Smuts.....              | 0000          | N/8<br>37      | N/8<br>32   | N/8<br>32   | calm<br>3   | calm<br>30  | calm<br>30  | calm<br>37  | calm<br>30  | N/11<br>45  | N/12<br>47  | N/10<br>49  | N/10<br>43  | 12    | 12    |
|  | 1000          | N/8<br>23      | N/8<br>18   | N/8<br>19   | W/10<br>24  | W/9<br>20   | W/11<br>19  | N/10<br>20  | W/11<br>21  | N/12<br>32  | N/12<br>35  | N/11<br>31  | N/9<br>25   | 12    | 12    |
|  | 2000          | calm<br>47     | calm<br>53  | calm<br>43  | calm<br>44  | calm<br>44  | calm<br>44  | calm<br>24  | calm<br>23  | N/8<br>28   | N/8<br>27   | calm<br>32  | calm<br>40  | 12    | 12    |
| Kimberley.....                           | 0000          | N/12<br>44     | N/11<br>41  | N/9<br>47   | N/9<br>41   | N/8<br>43   | N/8<br>43   | N/10<br>49  | N/11<br>47  | N/12<br>42  | N/13<br>40  | N/12<br>44  | N/13<br>47  | 12    | 12    |
|  | 1000          | W/12<br>23     | W/10<br>31  | N/10<br>30  | N/10<br>30  | N/10<br>22  | N/10<br>31  | N/12<br>30  | N/13<br>33  | W/13<br>33  | W/13<br>35  | W/12<br>36  | W/12<br>34  | 12    | 12    |
|  | 2000          | N/10<br>21     | calm<br>24  | N/8<br>24   | calm<br>30  | calm<br>27  | N/8<br>27   | N/8<br>33   | N/8<br>27   | N/8<br>23   | S/10<br>20  | N/10<br>21  | N/10<br>22  | 12    | 12    |
| Kuruman.....                             | 0000          | calm<br>43     | calm<br>50  | calm<br>43  | calm<br>62  | calm<br>60  | calm<br>58  | calm<br>60  | calm<br>55  | calm<br>43  | calm<br>27  | calm<br>23  | calm<br>33  | 9-11  | 9-11  |
|  | 1000          | W/10<br>29     | NW/17<br>27 | NW/9<br>26  | W/9<br>30   | NW/10<br>28 | NW/10<br>32 | NW/10<br>33 | NW/11<br>41 | NW/10<br>41 | NW/10<br>36 | NW/9<br>35  | NW/7<br>33  | 9-11  | 9-11  |
|  | 2000          | calm<br>57     | calm<br>66  | calm<br>68  | calm<br>80  | calm<br>75  | calm<br>70  | calm<br>70  | calm<br>65  | calm<br>61  | calm<br>50  | calm<br>54  | calm<br>53  | 9-11  | 9-11  |

Johannesburg, Jan. Summit.

Kimberley.....

Kutsum.....

|                   |      |       |    |      |      |      |      |      |      |       |      |      |      |      |      |       |       |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |      |       |       |       |      |
|-------------------|------|-------|----|------|------|------|------|------|------|-------|------|------|------|------|------|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|-------|-------|------|
| Lydenburg .....   | 0800 | calm  | 50 | SE/7 | calm | 62   | SF/7 | calm | 77   | NW/6  | calm | 85   | N/7  | calm | 75   | N/8   | calm  | 81   | NW/6  | calm  | 79    | N/8   | calm  | 73    | N/8   | calm  | 63    | N/10  | calm  | 51    | calm  | 59    | calm  | 5-6   |      |       |       |       |      |
|                   | 1400 | SE/7  | 25 | calm | calm | 27   | calm | 23   | calm | 23    | calm | 25   | calm | 25   | calm | 25    | calm  | 28   | calm  | 28    | calm  | 26    | calm  | 33    | calm  | 30    | calm  | 30    | NW/6  | calm  | 51    | calm  | 59    | calm  | 5-6  |       |       |       |      |
|                   | 2000 | calm  | 39 | calm | 41   | calm | 43   | calm | 53   | calm  | 53   | calm | 73   | calm | 73   | calm  | 73    | calm | 65    | calm  | 64    | calm  | 49    | calm  | 45    | calm  | 45    | calm  | 43    | calm  | 47    | calm  | 59    | calm  | 5-6  |       |       |       |      |
| Macuville .....   | 0800 | E/10  | 52 | E/11 | calm | 45   | calm | 48   | calm | calm  | calm | 84   | calm | calm | 83   | calm  | calm  | 84   | calm  | calm  | 69    | calm  | 42    | calm  | 42    | E/12  | E/12  | E/12  | E/11  | E/10  | 54    | calm  | 59    | calm  | 5-6  |       |       |       |      |
|                   | 1400 | E/11  | 49 | calm | 41   | calm | 37   | calm | 33   | calm  | calm | 39   | calm | calm | 48   | calm  | calm  | 48   | calm  | calm  | 35    | calm  | 44    | calm  | 40    | calm  | 40    | calm  | 35    | calm  | 42    | calm  | 59    | calm  | 5-6  |       |       |       |      |
|                   | 2000 | E/10  | 46 | calm | 61   | calm | 59   | calm | 77   | calm  | calm | 92   | calm | calm | 91   | calm  | calm  | 90   | calm  | calm  | 84    | calm  | 77    | calm  | 50    | calm  | calm  | calm  | calm  | calm  | 51    | calm  | 59    | calm  | 5-6  |       |       |       |      |
| Mafeking .....    | 0800 | NE/10 | 42 | NZ/9 | NE/8 | 43   | N/9  | 31   | NE/8 | E/5   | 46   | N/9  | N/8  | N/9  | 46   | N/9   | E/5   | 90   | E/6   | 35    | NE/11 | 41    | NE/11 | 36    | NE/13 | NE/12 | NE/12 | NE/12 | NE/12 | NE/12 | NE/12 | NE/12 | NE/12 | NE/12 | 9-10 |       |       |       |      |
|                   | 1400 | N/9   | 31 | N/8  | N/9  | 28   | calm | 29   | calm | calm  | 50   | calm | calm | calm | 50   | calm  | calm  | 44   | calm  | calm  | 45    | calm  | 39    | calm  | 34    | calm  | calm  | calm  | calm  | 39    | calm  | 35    | calm  | 59    | calm | 9-10  |       |       |      |
|                   | 2000 | calm  | 42 | calm | 42   | calm | 51   | calm | 52   | calm  | calm | 70   | E/8  | E/8  | E/8  | 62    | E/8   | E/9  | 69    | E/8   | E/7   | 81    | E/11  | E/11  | E/12  | E/12  | E/12  | E/12  | E/12  | 77    | 78    | 78    | 78    | 78    | 78   | 11-12 |       |       |      |
| Marmitz .....     | 0800 | E/9   | 81 | E/8  | E/9  | 85   | E/8  | 74   | E/9  | E/7   | 70   | E/7  | E/7  | E/7  | 62   | E/8   | E/9   | 69   | E/8   | E/7   | 81    | E/11  | E/11  | E/11  | E/12  | E/12  | E/12  | E/12  | E/12  | E/12  | E/12  | E/12  | E/12  | E/12  | E/12 | 10-12 |       |       |      |
|                   | 1400 | E/8   | 57 | calm | 51   | calm | 61   | calm | 47   | calm  | 40   | E/8  | E/8  | E/8  | 37   | calm  | calm  | 49   | E/9   | calm  | 52    | calm  | 57    | E/11  | E/11  | E/11  | E/10  | E/10  | E/10  | E/10  | E/10  | E/10  | E/10  | E/10  | E/10 | 10-12 |       |       |      |
|                   | 2000 | E/9   | 46 | calm | 52   | calm | 52   | calm | 54   | calm  | calm | 72   | calm | calm | 73   | calm  | calm  | 67   | calm  | calm  | 58    | calm  | 49    | E/9   | E/9   | E/9   | E/9   | E/9   | E/9   | E/9   | E/9   | E/9   | E/9   | E/9   | E/9  | E/9   | 11-12 |       |      |
| Matroosberg ..... | 0700 | E/8   | 30 | E/8  | E/8  | 35   | calm | 49   | calm | calm  | 52   | calm | calm | calm | 45   | calm  | calm  | 48   | calm  | calm  | 45    | calm  | 32    | calm  | calm  | calm  | calm  | calm  | calm  | calm  | calm  | calm  | calm  | calm  | calm | calm  | 10-11 |       |      |
|                   | 1300 | W/13  | 28 | W/12 | W/11 | 28   | W/12 | 22   | W/12 | W/12  | 23   | calm | calm | calm | 29   | N/11  | N/11  | 26   | calm  | calm  | 21    | calm  | 22    | calm  | calm  | calm  | calm  | calm  | calm  | calm  | calm  | calm  | calm  | calm  | calm | 10-11 |       |       |      |
|                   | 1900 | S/12  | 37 | S/11 | S/10 | 25   | calm | 31   | calm | calm  | 47   | calm | calm | calm | 45   | calm  | calm  | 46   | calm  | calm  | 43    | calm  | 31    | calm  | calm  | calm  | calm  | calm  | calm  | calm  | calm  | calm  | calm  | calm  | calm | calm  | 10-11 |       |      |
| Middeburg .....   | 0800 | calm  | 32 | calm | calm | 47   | calm | 40   | calm | calm  | 38   | N/6  | N/6  | N/6  | 47   | N/6   | N/6   | 49   | N/6   | N/6   | 41    | calm  | calm  | calm  | calm  | calm  | calm  | calm  | calm  | calm  | calm  | calm  | calm  | calm  | calm | calm  | 11    | 10-11 |      |
|                   | 1400 | W/13  | 30 | W/13 | W/12 | 49   | W/12 | 27   | W/12 | W/12  | 33   | calm | calm | calm | 32   | NW/13 | NW/13 | 36   | NW/13 | NW/13 | 31    | NW/15 | 28    | NW/15 | 31    | W/15  | W/15  | W/15  | W/14  | W/14  | W/14  | W/14  | W/14  | W/14  | W/14 | 11    | 10-11 |       |      |
|                   | 2000 | SE/9  | 27 | SE/8 | calm | 25   | calm | 31   | calm | calm  | 47   | N/5  | N/5  | N/5  | 45   | N/5   | N/5   | 40   | N/5   | N/5   | 39    | calm  | calm  | calm  | calm  | calm  | calm  | calm  | calm  | calm  | calm  | calm  | calm  | calm  | calm | calm  | calm  | 10-11 |      |
| Okiep .....       | 0700 | calm  | 34 | calm | calm | 38   | calm | 44   | calm | calm  | 44   | calm | calm | calm | 37   | calm  | calm  | 40   | calm  | calm  | 44    | calm  | 43    | calm  | calm  | calm  | calm  | calm  | calm  | calm  | calm  | calm  | calm  | calm  | calm | calm  | calm  | 12-13 |      |
|                   | 1300 | SW/8  | 39 | SW/8 | SW/7 | 26   | N/9  | 18   | N/9  | NE/11 | 33   | calm | calm | calm | 33   | NW/8  | NW/8  | 27   | NE/11 | NE/11 | 23    | calm  | calm  | calm  | calm  | calm  | calm  | calm  | calm  | calm  | calm  | calm  | calm  | calm  | calm | calm  | calm  | 12-13 |      |
|                   | 1900 | SW/9  | 62 | SW/8 | SW/7 | 37   | calm | 32   | calm | calm  | 38   | calm | calm | calm | 41   | calm  | calm  | 46   | calm  | calm  | 38    | calm  | 33    | calm  | calm  | calm  | calm  | calm  | calm  | calm  | calm  | calm  | calm  | calm  | calm | calm  | calm  | 12-13 |      |
| Phalaborwa .....  | 0800 | SE/8  | 31 | calm | calm | 39   | calm | 50   | calm | calm  | 72   | calm | calm | calm | 72   | calm  | calm  | 63   | calm  | calm  | 49    | calm  | calm  | calm  | calm  | calm  | calm  | calm  | calm  | calm  | calm  | calm  | calm  | calm  | calm | calm  | calm  | 10    | 10   |
|                   | 1400 | SE/8  | 22 | SE/9 | SE/8 | 28   | calm | 24   | calm | calm  | 32   | calm | calm | calm | 25   | calm  | calm  | 26   | calm  | calm  | 25    | SE/9  | SE/10 | SE/10 | SE/10 | SE/10 | SE/10 | SE/10 | SE/9  | SE/9  | SE/9  | E/8   | E/8   | E/8   | E/8  | E/8   | 9-10  |       |      |
|                   | 2000 | calm  | 43 | calm | calm | 52   | calm | 48   | calm | calm  | 54   | calm | calm | calm | 49   | calm  | calm  | 49   | calm  | calm  | 43    | calm  | 40    | calm  | calm  | calm  | calm  | calm  | calm  | calm  | calm  | calm  | calm  | calm  | calm | calm  | calm  | calm  | 9-10 |

FIGURE 47. DIRECTION, MEAN SPEED AND FREQUENCY OF PREVAILING SURFACE WIND (Continued)

| COUNTRY AND STATION      |      | HOUR<br>(LST) | DATA BASE INFO |       |     |       |     |       |     |       |     |       |       |       |       |       |       |       |
|--------------------------|------|---------------|----------------|-------|-----|-------|-----|-------|-----|-------|-----|-------|-------|-------|-------|-------|-------|-------|
|                          |      |               | JAN            | FEB   | MAR | APR   | MAY | JUN   | JUL | AUG   | SEP | OCT   | NOV   | DEC   | FOR   | CYR   |       |       |
| Republic of South Africa |      |               |                |       |     |       |     |       |     |       |     |       |       |       |       |       |       |       |
| (Continued):             |      |               |                |       |     |       |     |       |     |       |     |       |       |       |       |       |       |       |
| Petersburg.....          |      |               |                |       |     |       |     |       |     |       |     |       |       |       |       |       |       |       |
|                          | 0800 | E/9           | 38             | calm  | 45  | calm  | 54  | calm  | 60  | calm  | 61  | calm  | calm  | E/10  | E/10  | E/9   | 12    | 12    |
|                          | 1400 | E/10          | 29             | E/9   | 27  | calm  | 25  | calm  | 26  | calm  | 23  | calm  | NE/10 | NE/10 | NE/10 | NE/9  | 12    | 12    |
|                          | 2000 | E/9           | 59             | E/9   | 61  | E/7   | 46  | E/6   | 41  | calm  | 48  | E/7   | E/9   | E/10  | E/9   | E/10  | 12    | 12    |
| Piet Retief.....         |      |               |                |       |     |       |     |       |     |       |     |       |       |       |       |       |       |       |
|                          | 0800 | calm          | 22             | NW/3  | 27  | NW/2  | 36  | NW/3  | 29  | NW/4  | 33  | NW/4  | NW/4  | NW/3  | NW/4  | calm  | 11-12 | 11-12 |
|                          | 1400 | SE/5          | 26             | SE/4  | 22  | SE/4  | 22  | SE/4  | 20  | NW/5  | 18  | SE/5  | SE/6  | NE/4  | NE/5  | SE/5  | 11-12 | 11-12 |
|                          | 2000 | SE/4          | 28             | SE/3  | 26  | SE/4  | 27  | calm  | 42  | calm  | 31  | calm  | calm  | calm  | calm  | SE/4  | 11-12 | 11-12 |
| Port Elizabeth.....      |      |               |                |       |     |       |     |       |     |       |     |       |       |       |       |       |       |       |
|                          | 0800 | W/12          | 31             | W/12  | 35  | calm  | 41  | calm  | 43  | calm  | 41  | W/10  | W/12  | W/13  | W/14  | W/13  | 12    | 12    |
|                          | 1400 | E/17          | 36             | SW/17 | 34  | E/13  | 33  | E/10  | 48  | W/14  | 44  | W/16  | W/20  | E/16  | E/17  | W/16  | 12    | 12    |
|                          | 2000 | E/13          | 32             | W/11  | 30  | calm  | 38  | W/12  | 42  | W/10  | 35  | W/10  | W/11  | W/12  | W/11  | E/12  | 12    | 11-12 |
| Port Saint Johns.....    |      |               |                |       |     |       |     |       |     |       |     |       |       |       |       |       |       |       |
|                          | 0800 | SW/8          | 29             | SW/7  | 25  | SW/6  | 33  | NW/7  | 48  | NW/8  | 57  | NW/8  | SW/10 | SW/8  | SW/9  | SW/9  | 12    | 12    |
|                          | 1400 | NE/17         | 45             | NE/18 | 38  | NE/14 | 41  | NE/15 | 41  | NE/10 | 43  | NE/11 | NE/16 | NE/19 | NE/19 | NE/17 | 12    | 12    |
|                          | 2000 | NE/16         | 38             | NE/14 | 37  | NE/14 | 27  | NE/12 | 25  | NW/6  | 30  | NW/6  | SW/8  | NE/18 | NE/14 | NE/14 | 12    | 11-12 |
| Queenstown.....          |      |               |                |       |     |       |     |       |     |       |     |       |       |       |       |       |       |       |
|                          | 0800 | calm          | 72             | calm  | 77  | calm  | 79  | calm  | 82  | calm  | 77  | calm  | calm  | calm  | calm  | calm  | 9-11  | 9-11  |
|                          | 1400 | SE/7          | 21             | calm  | 28  | calm  | 31  | calm  | 29  | NW/11 | 32  | NW/11 | NW/12 | calm  | calm  | calm  | 9-11  | 9-11  |
|                          | 2000 | E/8           | 34             | calm  | 47  | calm  | 65  | calm  | 70  | calm  | 64  | calm  | calm  | calm  | SE/7  | SE/7  | 8-9   | 8-9   |
| Sheepun.....             |      |               |                |       |     |       |     |       |     |       |     |       |       |       |       |       |       |       |
|                          | 0800 | calm          | 85             | calm  | 90  | calm  | 93  | calm  | 90  | calm  | 87  | calm  | calm  | calm  | calm  | calm  | 5-6   | 5-6   |
|                          | 1400 | calm          | 35             | SE/6  | 35  | calm  | 42  | calm  | 47  | calm  | 36  | calm  | calm  | SE/6  | SE/6  | SE/6  | 5-6   | 5-6   |
|                          | 2000 | calm          | 53             | calm  | 57  | calm  | 61  | calm  | 87  | calm  | 74  | calm  | calm  | calm  | calm  | calm  | 5-6   | 5-6   |
| Uppington.....           |      |               |                |       |     |       |     |       |     |       |     |       |       |       |       |       |       |       |
|                          | 0700 | calm          | 25             | calm  | 36  | calm  | 49  | calm  | 56  | calm  | 46  | calm  | calm  | calm  | S/7   | S/7   | 12    | 11-12 |
|                          | 1300 | N/12          | 21             | N/12  | 29  | N/13  | 35  | N/14  | 41  | N/14  | 45  | N/17  | N/19  | S/9   | S/8   | S/7   | 12    | 11-12 |
|                          | 1900 | SW/9          | 26             | calm  | 34  | calm  | 42  | calm  | 47  | calm  | 32  | calm  | SW/9  | SW/9  | calm  | SW/9  | 12    | 11-12 |



|                    |       |       |      |      |       |      |      |      |      |       |       |       |       |       |       |       |
|--------------------|-------|-------|------|------|-------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|
| Walvis Bay.....    | 1300  | SW/10 | SW/8 | SW/9 | SW/10 | SW/7 | SW/7 | SW/8 | SW/9 | SW/10 | SW/11 | SW/10 | SW/9  | SW/9  | 7-8   | 5-6   |
|                    |       | 37    | 48   | 58   | 54    | 48   | 39   | 44   | 51   | 50    | 62    | 57    | 58    | 58    | 12-13 | 12-13 |
| Wepener.....       | 0800  |       |      |      | calm  | calm | calm | calm | calm | calm  | calm  | N/12  | calm  | calm  |       |       |
|                    |       | 33    | 48   | 53   | 61    | 68   | 75   | 75   | 59   | 48    | 35    | 29    | 31    | 31    | 12-13 | 12-13 |
| 1400               | NW/10 | 45    | 40   | 42   | 44    | 40   | 44   | 46   | 39   | 43    | 46    | 46    | NW/11 | NW/11 | 12-13 | 12-13 |
| 2000               |       | 40    | 54   | 54   | 69    | 71   | 78   | 75   | 72   | 57    | 52    | 47    | 46    | 46    | 12-13 | 12-13 |
| Witowmore.....     | 0800  | E/7   | calm | calm | calm  | calm | calm | calm | calm | calm  | calm  | E/7   | calm  | calm  | 8-9   | 8-9   |
|                    |       | 30    | 36   | 44   | 57    | 73   | 79   | 68   | 60   | 39    | 34    | 29    | 25    | 25    | 8-9   | 8-9   |
| 1400               | SW/11 | 24    | 25   | 19   | 24    | 27   | 31   | 29   | 28   | 26    | 28    | 29    | 32    | 32    | 8-9   | 7-9   |
| 2000               | E/10  | 36    | E/9  | E/9  | calm  | calm | calm | calm | calm | calm  | E/9   | E/9   | E/10  | E/10  | 8-9   | 7-9   |
|                    |       |       |      |      | 46    | 64   | 65   | 57   | 47   | 31    | 34    | 41    | 30    | 30    |       |       |
| South-West Africa: |       |       |      |      |       |      |      |      |      |       |       |       |       |       |       |       |
| Gobabis.....       | 0700  | calm  | calm | calm | calm  | calm | calm | calm | calm | calm  | calm  | calm  | calm  | calm  | 8     | 8     |
|                    |       | 25    | 31   | 30   | 29    | 40   | 42   | 41   | 38   | 35    | 19    | 24    | 27    | 27    | 8     | 8     |
| 1300               | NE/8  | 28    | 27   | 26   | 30    | 28   | 27   | 34   | 23   | 24    | 24    | 25    | 25    | 25    | 8     | 8     |
| 1900               |       | 26    | 25   | 22   | 27    | 36   | 32   | 33   | 35   | 32    | 25    | 25    | 34    | 34    | 8     | 8     |
| 0700               |       | 37    | 45   | 43   | 33    | 41   | 47   | 49   | 44   | 31    | 34    | 31    | 30    | 30    | 9-10  | 9-10  |
| 1300               | N/9   | 23    | 24   | 27   | 34    | 42   | 43   | 46   | 43   | 28    | 22    | 16    | 18    | 18    | 9-10  | 9-10  |
| 1900               | S/15  | 53    | 45   | 32   | 27    | 26   | 26   | 27   | 24   | 36    | 40    | 54    | 54    | 54    | 9-10  | 9-10  |
| 0700               |       | 51    | 62   | 75   | 85    | 85   | 85   | 87   | 87   | 81    | 81    | 55    | 44    | 44    | 8     | 8     |
| 1300               | calm  | 40    | 39   | 38   | 34    | 41   | 38   | 38   | 33   | 34    | 33    | 31    | 46    | 46    | 8     | 8     |
| 1900               |       | 40    | 50   | 60   | 64    | 83   | 76   | 77   | 73   | 62    | 59    | 43    | 49    | 49    | 8     | 8     |
| 0700               |       | 54    | 54   | 68   | 68    | 59   | 58   | 64   | 60   | 61    | 55    | 49    | 48    | 48    | 8     | 8     |
| 1300               | E/7   | 21    | 24   | 24   | 23    | 39   | 25   | 35   | 29   | 19    | 28    | 22    | 21    | 21    | 8     | 8     |
| 1900               | W/9   | 39    | 38   | 59   | 63    | 71   | 58   | 73   | 67   | 51    | 53    | 40    | 42    | 42    | 8     | 8     |
| 0700               |       | 57    | 62   | 68   | 52    | 55   | 60   | 81   | 57   | 49    | 58    | 59    | 58    | 58    | 9-10  | 9-10  |
| 1300               | E/8   | 25    | 30   | 24   | 24    | 25   | 22   | 23   | 21   | 25    | 28    | 36    | 33    | 33    | 9-10  | 9-10  |
| 1900               |       | 40    | 41   | 55   | 59    | 60   | 53   | 59   | 51   | 49    | 44    | 30    | 28    | 28    | 8     | 8     |

FIGURE 48. MEAN NUMBER OF DAYS WITH SURFACE WIND SPEED  $\geq 27$  KNOTS  
(Based on days with 8 observations)

| COUNTRY AND STATION       |     |     |     |     |     |     |     |     |     |     |     |     | DATA BASE INFO |       |       |
|---------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|-------|-------|
|                           | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANN            | FOR   | CYR   |
| Botswana:                 |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |
| Francistown               | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 1   | *   | *   | 1              | 0     | 0     |
| Gaborone                  | 0   | 0   | 0   | *   | 0   | 0   | 0   | 0   | *   | *   | 0   | 0   | 1              | 0-7   | 0-7   |
| Ghanzi                    | 1   | *   | 0   | *   | *   | *   | 1   | 1   | 1   | 2   | 0   | *   | 7              | 8-8   | 8-8   |
| Maun                      | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0              | 0     | 0     |
| Shakawe                   | *   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | *              | 0     | 0     |
| Tlokgeng                  | 0   | 0   | 0   | 0   | *   | 0   | 0   | *   | 0   | 0   | 0   | 0   | *              | 0-7   | 0-7   |
| Tsane                     | 0   | *   | 0   | 0   | 0   | 0   | 0   | 0   | *   | 0   | 0   | 0   | *              | 0     | 0     |
| Republic of South Africa: |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |
| Alexander Bay             | 5   | 4   | 3   | 1   | 1   | *   | *   | 1   | 3   | 4   | 0   | 0   | 35             | 10-11 | 10-11 |
| Beaufort West             | 2   | 1   | 1   | 1   | 2   | 3   | 2   | 3   | 2   | 2   | 1   | 1   | 19             | 11-12 | 10-12 |
| Bathlehem                 | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 1              | 10-11 | 10-11 |
| Calvinia                  | 0   | 0   | 0   | 0   | 0   | *   | 0   | 0   | 0   | 0   | 0   | 0   | *              | 11-12 | 10-12 |
| Cape Agulhas              | 3   | 2   | 2   | 2   | 2   | 2   | 2   | 4   | 4   | 4   | 2   | 2   | 30             | 12    | 11-12 |
| Cape Columbine            | 5   | 2   | 2   | 1   | 1   | 2   | 2   | 3   | 2   | 2   | 5   | 5   | 30             | 12    | 12    |
| Cape Saint Lucia          | 1   | 2   | 2   | 2   | 2   | 1   | 3   | 5   | 5   | 4   | 2   | 3   | 39             | 11    | 10-11 |
| Cape Town/D.F. Malan      | 1   | *   | *   | *   | 0   | *   | *   | 1   | 1   | *   | 1   | 1   | 6              | 11-12 | 11-12 |
| De Aar                    | *   | *   | *   | 0   | 0   | 0   | *   | *   | *   | 0   | *   | 0   | 1              | 10-11 | 10-11 |
| Durban/Louis Botha        | *   | *   | 1   | 1   | *   | *   | 1   | 1   | 1   | 1   | 1   | 1   | 7              | 11-12 | 11-12 |
| East London               | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 2   | 2   | 2   | 14             | 11-12 | 11-12 |
| Estcourt                  | *   | *   | *   | *   | 0   | 0   | 0   | *   | *   | *   | *   | *   | 1              | 11    | 11    |
| Johannesburg/Jan Smuts    | *   | 0   | 0   | *   | 0   | *   | *   | *   | *   | 1   | *   | *   | 2              | 12    | 12    |
| Kimberley                 | *   | *   | *   | *   | *   | *   | *   | *   | 1   | 1   | *   | 1   | 4              | 12    | 12    |
| Kuruman                   | 0   | 0   | *   | 0   | 0   | 0   | 0   | 0   | 0   | *   | 0   | 0   | *              | 0-11  | 0-11  |
| Lydenburg                 | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0              | 8-8   | 8-8   |
| Macquarie                 | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0              | 2-8   | 2-8   |
| Mafeking                  | 0   | 0   | 0   | *   | 0   | 0   | 0   | 0   | 0   | *   | *   | *   | 1              | 9-10  | 9-10  |
| Mamets                    | 0   | 0   | 0   | 0   | 0   | 0   | 0   | *   | *   | *   | *   | *   | 1              | 11-12 | 10-11 |
| Matroosberg               | *   | *   | 0   | *   | 0   | *   | *   | *   | *   | 0   | *   | *   | 1              | 10-11 | 10-11 |
| Middelburg                | *   | *   | *   | *   | *   | *   | *   | 1   | 1   | *   | *   | *   | 3              | 10-11 | 10-11 |
| Okiep                     | *   | 0   | *   | *   | 0   | *   | *   | *   | *   | *   | 0   | *   | 1              | 12-13 | 11-13 |
| Phalaborwa                | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | *   | 0   | *   | 0   | *              | 9-10  | 9-10  |
| Pietersburg               | *   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | *   | 0   | 0   | *              | 12    | 12    |
| Piet Retief               | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0              | 11-12 | 11-12 |
| Port Elizabeth            | 1   | 1   | *   | 1   | *   | *   | 1   | 1   | 1   | 3   | 2   | 1   | 11             | 12    | 11-12 |
| Port Saint Johns          | 2   | 2   | 2   | 1   | 1   | *   | 1   | 2   | 3   | 5   | 4   | 2   | 24             | 12    | 11-12 |
| Queenstown                | 0   | 0   | 0   | 0   | 0   | 0   | *   | 0   | 0   | 0   | 0   | 0   | *              | 8-9   | 8-9   |
| Sheepun                   | 0   | *   | 0   | 0   | 0   | 1   | 0   | *   | *   | 0   | 0   | 0   | 1              | 8-8   | 8-8   |
| Uppington                 | *   | *   | *   | *   | *   | *   | 1   | 1   | 1   | 1   | 1   | 1   | 6              | 12    | 12    |
| Wepener                   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | *   | 0   | 0   | 0   | 0   | *              | 12-13 | 11-13 |
| Willowmore                | 0   | 0   | 0   | 0   | 0   | 0   | 0   | *   | 0   | 0   | 0   | 0   | *              | 8-9   | 7-9   |
| South-West Africa:        |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |
| Gobabis                   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0              | 8     | 8     |
| Keetmanshoop              | 1   | *   | *   | *   | *   | *   | *   | 1   | *   | 1   | 1   | 1   | 6              | 9-10  | 9-10  |
| Mariental                 | 0   | *   | 0   | 0   | 0   | 0   | 0   | 0   | *   | *   | 0   | 0   | 1              | 8     | 8     |
| Outjo                     | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | *   | 0   | *              | 8     | 8     |
| Windhoek                  | 0   | 0   | 0   | 0   | 0   | *   | 0   | 0   | *   | 0   | 0   | 0   | *              | 8     | 8     |

\* < 0.5 day.

FIGURE 49. MEAN NUMBER OF DAYS WITH THUNDERSTORMS

| COUNTRY AND STATION              | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANN | YRS REC |
|----------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------|
| <b>Botswana:</b>                 |     |     |     |     |     |     |     |     |     |     |     |     |     |         |
| Francistown                      | 6   | 7   | 4   | 4   | 1   | 1   | *   | *   | 1   | 5   | 9   | 9   | 46  | 6       |
| Gaborone                         | 11  | 7   | 7   | 6   | 2   | *   | 1   | *   | 3   | 8   | 11  | 11  | 68  | 6-7     |
| Ghanai                           | 20  | 14  | 11  | 9   | 1   | 1   | *   | *   | *   | 9   | 17  | 18  | 100 | 5-6     |
| Maun                             | 15  | 16  | 12  | 6   | 1   | 1   | *   | *   | 3   | 8   | 16  | 15  | 91  | 8-9     |
| Shakawe                          | 15  | 11  | 8   | 6   | 1   | *   | 0   | *   | 1   | 4   | 12  | 12  | 71  | 5       |
| Tsabong                          | 12  | 8   | 10  | 5   | 1   | 1   | 1   | 1   | 1   | 3   | 10  | 11  | 63  | 6-7     |
| Tseane                           | 14  | 13  | 12  | 6   | 3   | 1   | 1   | 1   | 1   | 6   | 14  | 12  | 82  | 6       |
| <b>Republic of South Africa:</b> |     |     |     |     |     |     |     |     |     |     |     |     |     |         |
| Alexander Bay                    | 1   | *   | 1   | 1   | *   | *   | *   | *   | 1   | *   | *   | 1   | 7   | 10-11   |
| Beaufort West                    | 5   | 3   | 5   | 2   | 1   | 0   | 1   | 1   | 1   | 2   | 3   | 5   | 28  | 11-12   |
| Bethlehem                        | 15  | 10  | 9   | 6   | 3   | 1   | *   | 1   | 6   | 10  | 14  | 16  | 92  | 10-11   |
| Bloomfontein                     | 10  | 9   | 14  | 4   | 3   | *   | 1   | 2   | 2   | 6   | 7   | 8   | 66  | 10      |
| Calvinia                         | 1   | 1   | 2   | 2   | 1   | *   | *   | *   | 1   | 1   | 1   | 1   | 12  | 15-17   |
| Cape Agulhas                     | *   | *   | *   | 1   | *   | *   | *   | *   | *   | *   | *   | *   | 3   | 31-32   |
| Cape Columbine                   | 0   | *   | *   | *   | *   | *   | *   | *   | *   | *   | *   | *   | 1   | 26      |
| Cape Saint Lucia                 | 4   | 3   | 3   | 4   | 3   | 2   | 1   | 1   | 3   | 6   | 5   | 5   | 39  | 10-11   |
| Cape Town/D.F. Malan             | *   | *   | 1   | 1   | 1   | 1   | *   | 1   | *   | 1   | 1   | *   | 6   | 11-12   |
| De Aar                           | 4   | 2   | 5   | 3   | 1   | *   | 1   | 1   | 2   | 2   | 4   | 4   | 29  | 10-11   |
| Durban/Louis Botha               | 6   | 3   | 5   | 4   | 2   | 1   | 1   | 1   | 3   | 5   | 8   | 7   | 45  | 11-12   |
| East London                      | 4   | 4   | 4   | 2   | 2   | *   | 1   | 1   | 1   | 3   | 3   | 3   | 27  | 22-23   |
| Estcourt                         | 19  | 14  | 14  | 8   | 3   | 1   | 1   | 1   | 5   | 10  | 16  | 18  | 109 | 23      |
| George                           | 1   | 1   | 2   | 1   | 1   | 1   | *   | *   | 1   | 1   | 1   | *   | 8   | 10      |
| Goodhouse                        | 3   | 4   | 3   | 2   | 1   | 1   | 1   | *   | *   | 1   | 1   | 2   | 18  | 12      |
| Johannesburg/Jan Smuts           | 14  | 10  | 9   | 6   | 2   | 1   | 1   | 1   | 4   | 10  | 14  | 15  | 86  | 12      |
| Kimberley                        | 10  | 8   | 9   | 5   | 2   | 1   | 1   | 1   | 2   | 5   | 7   | 9   | 61  | 27      |
| Kuruman                          | 9   | 7   | 7   | 3   | 2   | 1   | *   | 1   | 2   | 4   | 7   | 9   | 51  | 9-11    |
| Louis Trichardt                  | 4   | 2   | 2   | 1   | 1   | *   | *   | 1   | 1   | 2   | 5   | 3   | 21  | 8       |
| Lydenburg                        | 11  | 8   | 7   | 4   | 1   | 2   | *   | 2   | 1   | 6   | 13  | 10  | 65  | 5-6     |
| Maculville                       | 5   | 1   | 2   | 2   | 1   | 0   | 1   | 0   | 0   | 1   | 3   | 2   | 15  | 2-3     |
| Mafeking                         | 15  | 9   | 7   | 5   | 2   | 1   | *   | 1   | 3   | 6   | 10  | 11  | 68  | 14-15   |
| Marnitz                          | 12  | 8   | 5   | 6   | 2   | 1   | *   | 1   | 3   | 6   | 10  | 10  | 64  | 15-16   |
| Matroosberg                      | 1   | 1   | 2   | 2   | 1   | *   | *   | *   | 1   | 1   | 1   | 1   | 10  | 29-30   |
| Middelburg                       | 12  | 7   | 9   | 6   | 2   | 1   | 1   | 2   | 2   | 4   | 7   | 10  | 61  | 10-11   |
| Newcastle                        | 11  | 8   | 7   | 3   | 1   | 0   | 1   | 1   | 4   | 8   | 10  | 12  | 65  | 10      |
| Okiep                            | 1   | 1   | 1   | 1   | *   | *   | *   | *   | 1   | *   | 1   | *   | 7   | 23-25   |
| Phalaborwa                       | 3   | 2   | 1   | 1   | 1   | 1   | *   | *   | 1   | 2   | 4   | 3   | 15  | 9-10    |
| Pietersburg                      | 8   | 7   | 5   | 5   | 2   | 1   | 1   | *   | 3   | 6   | 10  | 10  | 56  | 12      |
| Piet Retief                      | 7   | 5   | 6   | 4   | 2   | *   | 1   | 1   | 5   | 8   | 9   | 10  | 57  | 10-12   |
| Port Elizabeth                   | 2   | 2   | 3   | 2   | 1   | 1   | 1   | 1   | 1   | 2   | 2   | 2   | 16  | 26      |
| Port Saint Johns                 | 4   | 4   | 5   | 4   | 2   | *   | 1   | 1   | 2   | 3   | 3   | 5   | 35  | 12      |
| Pretoria                         | 14  | 10  | 9   | 4   | 2   | 1   | 1   | 1   | 3   | 8   | 12  | 11  | 75  | 13      |
| Queenstown                       | 7   | 7   | 6   | 3   | 1   | *   | *   | 1   | 1   | 4   | 6   | 6   | 44  | 24-25   |
| Sheeprun                         | 16  | 13  | 12  | 5   | 2   | 1   | *   | 2   | 3   | 10  | 12  | 14  | 90  | 5-6     |
| Somerset East                    | 3   | 4   | 4   | 1   | 1   | *   | *   | *   | 1   | 2   | 3   | 3   | 24  | 20      |
| Uppington                        | 6   | 5   | 6   | 4   | 2   | 1   | 1   | 1   | 1   | 1   | 3   | 5   | 35  | 11-12   |
| Vanwykville                      | 4   | 5   | 6   | 3   | 1   | 1   | 1   | 1   | 2   | 3   | 2   | 2   | 30  | 12      |
| Wepener                          | 14  | 10  | 10  | 6   | 3   | 1   | 1   | 2   | 2   | 7   | 10  | 12  | 78  | 21-23   |
| Willowmore                       | 2   | 2   | 2   | 1   | *   | *   | 0   | *   | 1   | 1   | 2   | 1   | 14  | 7-9     |
| <b>South-West Africa:</b>        |     |     |     |     |     |     |     |     |     |     |     |     |     |         |
| Onbaba                           | 7   | 6   | 4   | 3   | 1   | *   | *   | *   | 1   | 3   | 4   | 7   | 36  | 41      |
| Keetmanshoop                     | 5   | 4   | 5   | 3   | 1   | *   | *   | *   | 1   | 2   | 4   | 4   | 31  | 9-10    |
| Mariental                        | 4   | 3   | 4   | 2   | 1   | *   | 0   | 1   | 1   | 1   | 2   | 2   | 21  | 8       |
| Outjo                            | 9   | 8   | 7   | 3   | 1   | 0   | 0   | 1   | 1   | 3   | 7   | 3   | 43  | 8       |
| Taameb                           | 11  | 9   | 7   | 3   | 1   | *   | *   | *   | 1   | 5   | 7   | 11  | 55  | 35      |
| Windhoek                         | 8   | 7   | 7   | 3   | 1   | *   | *   | *   | 1   | 4   | 5   | 7   | 45  | 50      |

\* &lt; 0.5 day.

FIGURE 80. MEAN NUMBER OF DAYS WITH TOTAL CLOUD COVER  $\frac{1}{2}$  OR LESS AND VISIBILITY  $\frac{1}{2}$  MILES OR GREATER AT SPECIFIED HOURS

| COUNTRY AND STATION       | HOUR<br>(LST) |     |     |     |     |     |     |     |     |     |     |     |     | DATA BASE INFO |       |       |  |
|---------------------------|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|-------|-------|--|
|                           |               | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANN            | FOR   | CYR   |  |
| Botswana:                 |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |  |
| Francistown               | 0800          | 8   | 9   | 14  | 14  | 23  | 21  | 21  | 24  | 24  | 18  | 9   | 8   | 191            | 6     | 6     |  |
| Gaborone                  | 0800          | 9   | 10  | 12  | 14  | 23  | 22  | 24  | 25  | 21  | 16  | 9   | 9   | 194            | 7     | 7     |  |
| Ghanzi                    | 0700          | 8   | 10  | 11  | 13  | 24  | 24  | 25  | 26  | 27  | 17  | 9   | 10  | 203            | 6     | 6     |  |
| Maun                      | 0800          | 8   | 6   | 12  | 19  | 26  | 25  | 25  | 28  | 24  | 18  | 9   | 8   | 209            | 9     | 9     |  |
| Shakawe                   | 0700          | 6   | 5   | 8   | 14  | 25  | 24  | 24  | 26  | 25  | 17  | 5   | 6   | 186            | 5     | 5     |  |
| Tsabong                   | 0700          | 17  | 18  | 14  | 19  | 24  | 23  | 24  | 27  | 26  | 22  | 17  | 20  | 251            | 6-7   | 6-7   |  |
| Tsane                     | 0700          | 12  | 13  | 13  | 17  | 26  | 23  | 24  | 26  | 25  | 21  | 14  | 16  | 230            | 6     | 6     |  |
| Republic of South Africa: |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |  |
| Alexander Bay             | 0700          | 12  | 10  | 11  | 13  | 13  | 16  | 16  | 14  | 13  | 12  | 14  | 12  | 155            | 12    | 12    |  |
| Beaufort West             | 0800          | 17  | 16  | 13  | 14  | 14  | 17  | 18  | 17  | 14  | 14  | 14  | 18  | 185            | 11-12 | 11-12 |  |
| Bethlehem                 | 0800          | 10  | 11  | 12  | 14  | 18  | 19  | 22  | 21  | 17  | 15  | 11  | 12  | 182            | 10-11 | 10-11 |  |
| Calvinia                  | 0700          | 24  | 21  | 21  | 18  | 17  | 18  | 20  | 19  | 17  | 17  | 21  | 24  | 235            | 12    | 12    |  |
| Cape Agulhas              | 0700          | 7   | 6   | 6   | 6   | 8   | 10  | 10  | 9   | 7   | 7   | 7   | 8   | 90             | 12    | 12    |  |
| Cape Columbine            | 0700          | 18  | 14  | 14  | 12  | 10  | 11  | 13  | 13  | 11  | 13  | 14  | 17  | 159            | 12    | 12    |  |
| Cape Saint Lucia          | 0800          | 6   | 8   | 11  | 11  | 16  | 19  | 20  | 17  | 10  | 7   | 4   | 6   | 135            | 11    | 11    |  |
| Cape Town/D.F. Malan      | 0700          | 10  | 16  | 16  | 13  | 9   | 9   | 11  | 12  | 11  | 12  | 14  | 18  | 158            | 11-12 | 11-12 |  |
| De Aar                    | 0800          | 22  | 19  | 20  | 17  | 16  | 15  | 19  | 19  | 19  | 18  | 21  | 23  | 227            | 10-11 | 10-11 |  |
| Durban/Louis Botha        | 0800          | 7   | 10  | 14  | 13  | 16  | 18  | 19  | 17  | 12  | 8   | 7   | 10  | 151            | 11-12 | 11-12 |  |
| East London               | 0800          | 8   | 9   | 10  | 13  | 15  | 17  | 17  | 15  | 12  | 9   | 9   | 10  | 143            | 12    | 12    |  |
| Katocourt                 | 0800          | 10  | 9   | 13  | 13  | 19  | 20  | 22  | 21  | 17  | 12  | 9   | 11  | 175            | 11    | 11    |  |
| Johannesburg/Jan Smuts    | 0800          | 11  | 12  | 17  | 17  | 21  | 22  | 22  | 24  | 22  | 17  | 11  | 11  | 207            | 12    | 12    |  |
| Kimberley                 | 0800          | 18  | 17  | 17  | 18  | 20  | 19  | 23  | 23  | 20  | 19  | 17  | 20  | 230            | 12    | 12    |  |
| Kuruman                   | 0800          | 19  | 16  | 18  | 20  | 23  | 22  | 26  | 27  | 22  | 21  | 18  | 20  | 252            | 9-11  | 9-11  |  |
| Lydenburg                 | 0800          | 8   | 12  | 16  | 14  | 24  | 24  | 26  | 27  | 23  | 18  | 9   | 11  | 212            | 5-6   | 5-6   |  |
| Maceville                 | 0800          | 9   | 4   | 15  | 11  | 23  | 19  | 24  | 21  | 21  | 14  | 12  | 12  | 183            | 2-3   | 2-3   |  |
| Mafeking                  | 0800          | 11  | 12  | 15  | 16  | 23  | 22  | 25  | 25  | 22  | 17  | 11  | 12  | 213            | 9-10  | 9-10  |  |
| Marrisa                   | 0800          | 12  | 11  | 19  | 18  | 25  | 22  | 24  | 26  | 22  | 17  | 11  | 11  | 217            | 11-12 | 10-12 |  |
| Matroosberg               | 0700          | 19  | 18  | 17  | 14  | 14  | 15  | 16  | 17  | 14  | 14  | 16  | 20  | 194            | 10-11 | 10-11 |  |
| Middelburg                | 0800          | 17  | 16  | 16  | 18  | 18  | 19  | 20  | 20  | 18  | 16  | 16  | 19  | 211            | 11    | 10-11 |  |
| Okiep                     | 0700          | 24  | 22  | 21  | 21  | 20  | 21  | 21  | 21  | 20  | 19  | 21  | 24  | 255            | 12-13 | 12-13 |  |
| Phalaborwa                | 0800          | 6   | 7   | 10  | 11  | 20  | 21  | 22  | 19  | 16  | 13  | 8   | 6   | 164            | 10    | 10    |  |
| Pietersburg               | 0800          | 8   | 7   | 12  | 14  | 21  | 21  | 22  | 23  | 20  | 14  | 7   | 8   | 178            | 12    | 12    |  |
| Piet Retief               | 0800          | 10  | 8   | 10  | 12  | 20  | 21  | 20  | 18  | 10  | 13  | 8   | 9   | 164            | 11-12 | 10-12 |  |
| Port Klinaabath           | 0800          | 12  | 11  | 12  | 12  | 15  | 16  | 18  | 14  | 12  | 10  | 10  | 11  | 145            | 12    | 12    |  |
| Port Saint John           | 0800          | 7   | 8   | 11  | 11  | 18  | 18  | 18  | 16  | 10  | 8   | 8   | 8   | 139            | 12    | 12    |  |
| Queenstown                | 0800          | 12  | 10  | 11  | 11  | 14  | 16  | 17  | 16  | 13  | 10  | 12  | 15  | 187            | 9-11  | 9-11  |  |
| Sheeprun                  | 0800          | 8   | 10  | 10  | 11  | 17  | 17  | 19  | 20  | 13  | 10  | 9   | 13  | 185            | 5-6   | 5-6   |  |
| Uplington                 | 0700          | 20  | 19  | 18  | 20  | 21  | 21  | 24  | 23  | 20  | 19  | 20  | 22  | 245            | 12    | 12    |  |
| Wepener                   | 0800          | 17  | 15  | 16  | 16  | 18  | 14  | 16  | 21  | 19  | 17  | 15  | 19  | 202            | 12-13 | 12-13 |  |
| Willowmore                | 0800          | 19  | 17  | 16  | 16  | 19  | 22  | 21  | 21  | 17  | 17  | 19  | 22  | 226            | 8-9   | 8-9   |  |
| South-West Africa:        |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |  |
| Gobabis                   | 0700          | 20  | 18  | 20  | 22  | 28  | 27  | 28  | 29  | 26  | 24  | 20  | 24  | 255            | 8     | 8     |  |
| Keetmanshoop              | 0700          | 21  | 17  | 21  | 22  | 22  | 23  | 25  | 24  | 21  | 20  | 22  | 24  | 262            | 9-10  | 9-10  |  |
| Mariental                 | 0700          | 21  | 18  | 22  | 24  | 27  | 26  | 28  | 28  | 26  | 24  | 22  | 27  | 291            | 8     | 8     |  |
| Outjo                     | 0700          | 14  | 13  | 15  | 21  | 28  | 28  | 28  | 29  | 26  | 23  | 18  | 19  | 260            | 8     | 8     |  |
| Windhoek                  | 0700          | 14  | 11  | 13  | 19  | 25  | 26  | 28  | 27  | 24  | 20  | 17  | 18  | 241            | 9-10  | 9-10  |  |
| Botswana:                 |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |  |
| Francistown               | 1400          | 3   | 4   | 6   | 9   | 19  | 19  | 19  | 23  | 23  | 13  | 2   | 3   | 141            | 6     | 6     |  |
| Gaborone                  | 1400          | 3   | 4   | 7   | 8   | 19  | 20  | 21  | 23  | 22  | 14  | 4   | 5   | 149            | 6-7   | 6-7   |  |
| Ghanzi                    | 1300          | 2   | 2   | 3   | 8   | 23  | 23  | 25  | 27  | 26  | 13  | 3   | 3   | 158            | 6     | 6     |  |
| Maun                      | 1400          | 2   | 2   | 5   | 10  | 23  | 24  | 25  | 27  | 22  | 14  | 2   | 2   | 160            | 9     | 9     |  |
| Shakawe                   | 1300          | *   | 1   | 1   | 6   | 19  | 22  | 24  | 25  | 24  | 11  | 1   | 1   | 137            | 5     | 5     |  |
| Tsabong                   | 1300          | 10  | 12  | 11  | 17  | 23  | 23  | 25  | 27  | 26  | 20  | 10  | 12  | 214            | 6-7   | 6-7   |  |
| Tsane                     | 1300          | 5   | 5   | 5   | 13  | 20  | 22  | 24  | 27  | 26  | 17  | 7   | 7   | 182            | 6     | 6     |  |
| Republic of South Africa: |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |  |
| Alexander Bay             | 1300          | 24  | 23  | 25  | 22  | 21  | 21  | 22  | 21  | 23  | 21  | 24  | 25  | 272            | 12    | 12    |  |
| Beaufort West             | 1400          | 15  | 17  | 13  | 13  | 13  | 16  | 18  | 17  | 15  | 13  | 14  | 15  | 175            | 11-12 | 11-12 |  |
| Bethlehem                 | 1400          | 5   | 6   | 7   | 11  | 18  | 19  | 23  | 23  | 17  | 11  | 5   | 4   | 152            | 10-11 | 10-11 |  |
| Calvinia                  | 1300          | 24  | 21  | 21  | 17  | 17  | 17  | 21  | 19  | 18  | 18  | 19  | 22  | 235            | 12    | 11-12 |  |
| Cape Agulhas              | 1300          | 13  | 12  | 10  | 10  | 8   | 9   | 11  | 11  | 11  | 11  | 13  | 15  | 134            | 12    | 12    |  |
| Cape Columbine            | 1300          | 22  | 18  | 19  | 13  | 11  | 11  | 13  | 13  | 15  | 16  | 17  | 21  | 188            | 12    | 12    |  |
| Cape Saint Lucia          | 1400          | 10  | 11  | 14  | 13  | 17  | 17  | 19  | 18  | 14  | 10  | 7   | 12  | 162            | 11    | 10-11 |  |

Footnote at end of table.

FIGURE 50. DAYS WITH TOTAL CLOUD COVER  $\frac{1}{2}$  OR LESS AND VISIBILITY  $\frac{3}{4}$  MILES OR GREATER (Continued)

| COUNTRY AND STATION                   | HOUR<br>(LST) |     |     |     |     |     |     |     |     |     |     |     |     | DATA BASE INFO |       |       |
|---------------------------------------|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|-------|-------|
|                                       |               | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANN            | FOR   | CYR   |
| Republic of South Africa (Continued): |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |
| Cape Town/D.F. Malan.....             | 1300          | 21  | 18  | 18  | 14  | 10  | 10  | 12  | 12  | 12  | 16  | 17  | 20  | 179            | 11-12 | 11-12 |
| De Aar.....                           | 1400          | 14  | 15  | 13  | 13  | 18  | 19  | 22  | 22  | 18  | 14  | 15  | 15  | 198            | 10-11 | 10-11 |
| Durban/Louis Botha.....               | 1400          | 9   | 11  | 14  | 14  | 18  | 20  | 21  | 20  | 13  | 8   | 7   | 8   | 162            | 11-12 | 11-12 |
| East London.....                      | 1400          | 10  | 11  | 10  | 12  | 13  | 17  | 18  | 15  | 12  | 9   | 9   | 9   | 144            | 12    | 12    |
| Estcourt.....                         | 1400          | 11  | 13  | 16  | 17  | 22  | 23  | 25  | 24  | 19  | 14  | 10  | 11  | 206            | 11    | 11    |
| Johannesburg/Jan Smuts.....           | 1400          | 8   | 8   | 7   | 10  | 21  | 22  | 24  | 25  | 20  | 15  | 6   | 5   | 163            | 12    | 12    |
| Kimberley.....                        | 1400          | 9   | 10  | 9   | 13  | 16  | 20  | 22  | 23  | 18  | 13  | 11  | 10  | 174            | 12    | 12    |
| Kuruman.....                          | 1400          | 10  | 11  | 11  | 18  | 20  | 21  | 25  | 26  | 21  | 17  | 13  | 12  | 203            | 9-11  | 9-11  |
| Lydenburg.....                        | 1400          | 2   | 6   | 8   | 8   | 20  | 18  | 24  | 22  | 19  | 12  | 3   | 5   | 146            | 5-6   | 5-6   |
| Macoville.....                        | 1400          | 3   | 1   | 7   | 8   | 17  | 14  | 19  | 20  | 18  | 17  | 7   | 10  | 140            | 2-3   | 2-3   |
| Mafeking.....                         | 1400          | 4   | 4   | 5   | 9   | 19  | 20  | 23  | 25  | 19  | 11  | 4   | 5   | 147            | 9-10  | 9-10  |
| Marnitz.....                          | 1400          | 3   | 4   | 7   | 10  | 20  | 19  | 21  | 23  | 21  | 16  | 6   | 5   | 155            | 11-12 | 10-12 |
| Matroosberg.....                      | 1300          | 18  | 19  | 17  | 14  | 13  | 15  | 17  | 17  | 16  | 14  | 16  | 19  | 196            | 10-11 | 10-11 |
| Middelburg.....                       | 1400          | 12  | 14  | 12  | 13  | 16  | 19  | 20  | 21  | 18  | 12  | 13  | 14  | 184            | 11    | 10-11 |
| Okiep.....                            | 1300          | 25  | 21  | 22  | 21  | 19  | 19  | 22  | 22  | 21  | 20  | 22  | 23  | 258            | 12-13 | 12-13 |
| Phalaborwa.....                       | 1400          | 6   | 6   | 9   | 10  | 19  | 18  | 20  | 19  | 18  | 14  | 6   | 6   | 152            | 9-10  | 9-10  |
| Pietersburg.....                      | 1400          | 5   | 4   | 7   | 9   | 18  | 18  | 22  | 22  | 19  | 14  | 5   | 6   | 147            | 12    | 12    |
| Piet Retief.....                      | 1400          | 6   | 8   | 10  | 11  | 20  | 21  | 23  | 21  | 16  | 10  | 5   | 6   | 167            | 11-12 | 10-11 |
| Port Elizabeth.....                   | 1400          | 15  | 14  | 14  | 13  | 15  | 16  | 17  | 16  | 13  | 13  | 13  | 15  | 175            | 12    | 12    |
| Port Saint Johns.....                 | 1400          | 8   | 10  | 11  | 12  | 14  | 18  | 18  | 17  | 12  | 8   | 8   | 9   | 143            | 12    | 12    |
| Queenstown.....                       | 1400          | 11  | 11  | 12  | 13  | 16  | 19  | 19  | 20  | 17  | 10  | 11  | 12  | 173            | 9-11  | 9-11  |
| Sheeprun.....                         | 1400          | 4   | 9   | 8   | 10  | 15  | 17  | 20  | 19  | 14  | 8   | 6   | 5   | 139            | 5-6   | 5-6   |
| Uppington.....                        | 1300          | 16  | 16  | 15  | 17  | 18  | 22  | 23  | 24  | 21  | 18  | 16  | 18  | 224            | 12    | 12    |
| Walvis Bay.....                       | 1300          | 12  | 9   | 12  | 16  | 17  | 20  | 21  | 14  | 13  | 14  | 14  | 11  | 173            | 7-8   | 5-6   |
| Wepener.....                          | 1400          | 5   | 7   | 7   | 12  | 15  | 18  | 21  | 21  | 17  | 12  | 8   | 7   | 150            | 12-13 | 12-13 |
| Willowmore.....                       | 1400          | 22  | 21  | 20  | 19  | 19  | 22  | 22  | 21  | 21  | 19  | 18  | 23  | 247            | 8-9   | 7-9   |
| South-West Africa:                    |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |
| Gobabis.....                          | 1300          | 11  | 11  | 11  | 19  | 27  | 28  | 29  | 29  | 26  | 21  | 11  | 12  | 234            | 8     | 8     |
| Kestmannsloep.....                    | 1300          | 17  | 15  | 16  | 19  | 22  | 23  | 25  | 24  | 22  | 19  | 18  | 18  | 235            | 9-10  | 9-10  |
| Mariental.....                        | 1300          | 16  | 14  | 17  | 21  | 26  | 27  | 28  | 29  | 26  | 23  | 16  | 20  | 263            | 8     | 8     |
| Outjo.....                            | 1300          | 9   | 9   | 9   | 14  | 26  | 28  | 28  | 28  | 26  | 20  | 11  | 11  | 219            | 8     | 8     |
| Windhoek.....                         | 1300          | 7   | 6   | 6   | 12  | 22  | 25  | 25  | 27  | 22  | 15  | 9   | 8   | 187            | 9-10  | 9-10  |
| Botswana:                             |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |
| Francistown.....                      | 2000          | 15  | 15  | 19  | 18  | 27  | 27  | 26  | 27  | 27  | 21  | 13  | 11  | 245            | 6     | 6     |
| Gaborone.....                         | 2000          | 10  | 12  | 15  | 17  | 24  | 24  | 26  | 27  | 25  | 15  | 10  | 12  | 217            | 6-7   | 6-7   |
| Ghanzi.....                           | 1900          | 7   | 10  | 14  | 17  | 27  | 27  | 27  | 29  | 27  | 16  | 9   | 7   | 216            | 5-6   | 5-6   |
| Maun.....                             | 2000          | 8   | 6   | 14  | 19  | 27  | 26  | 28  | 28  | 24  | 18  | 10  | 8   | 216            | 9     | 8-9   |
| Shakawe.....                          | 1900          | 6   | 7   | 14  | 18  | 26  | 27  | 27  | 27  | 28  | 18  | 6   | 9   | 214            | 5     | 5     |
| Tlokgeng.....                         | 1900          | 15  | 17  | 16  | 24  | 26  | 25  | 27  | 29  | 26  | 23  | 16  | 17  | 260            | 6-7   | 6-7   |
| Tlokgeng.....                         | 1900          | 10  | 12  | 16  | 19  | 27  | 26  | 27  | 28  | 27  | 20  | 14  | 14  | 237            | 6     | 6     |
| Republic of South Africa:             |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |
| Alexander Bay.....                    | 1900          | 19  | 17  | 19  | 20  | 21  | 21  | 21  | 22  | 19  | 17  | 15  | 17  | 225            | 10-11 | 10-11 |
| Beaufort West.....                    | 2000          | 15  | 15  | 15  | 19  | 19  | 21  | 22  | 23  | 20  | 19  | 17  | 17  | 227            | 11-12 | 10-12 |
| Bethlehem.....                        | 2000          | 9   | 13  | 15  | 18  | 24  | 24  | 27  | 27  | 21  | 16  | 12  | 10  | 218            | 10-11 | 10-11 |
| Calvinia.....                         | 1900          | 26  | 22  | 23  | 22  | 22  | 22  | 24  | 23  | 23  | 22  | 22  | 24  | 276            | 11-12 | 10-12 |
| Cape Agulhas.....                     | 1900          | 9   | 8   | 9   | 12  | 14  | 15  | 15  | 16  | 14  | 12  | 10  | 10  | 145            | 12    | 11-12 |
| Cape Columbine.....                   | 1900          | 22  | 19  | 19  | 18  | 16  | 16  | 19  | 19  | 18  | 18  | 19  | 21  | 223            | 12    | 12    |
| Cape Saint Lucia.....                 | 2000          | 8   | 11  | 15  | 14  | 21  | 21  | 21  | 21  | 15  | 8   | 6   | 7   | 168            | 11    | 10-11 |
| Cape Town/D.F. Malan.....             | 1900          | 21  | 18  | 20  | 18  | 14  | 13  | 15  | 16  | 17  | 16  | 17  | 20  | 206            | 11-12 | 11-12 |
| De Aar.....                           | 2000          | 17  | 18  | 20  | 21  | 23  | 23  | 27  | 27  | 23  | 22  | 19  | 20  | 258            | 10-11 | 10-11 |
| Durban/Louis Botha.....               | 2000          | 3   | 5   | 6   | 9   | 14  | 17  | 18  | 16  | 9   | 4   | 3   | 3   | 107            | 11-12 | 11-12 |
| East London.....                      | 2000          | 6   | 8   | 9   | 14  | 17  | 20  | 22  | 20  | 13  | 9   | 7   | 8   | 155            | 11-12 | 10-12 |
| Estcourt.....                         | 2000          | 6   | 9   | 13  | 17  | 23  | 24  | 27  | 25  | 19  | 12  | 8   | 7   | 190            | 11    | 11    |
| Johannesburg/Jan Smuts.....           | 2000          | 11  | 12  | 18  | 19  | 20  | 24  | 27  | 28  | 22  | 10  | 10  | 10  | 224            | 12    | 12    |
| Kimberley.....                        | 2000          | 12  | 14  | 15  | 18  | 21  | 23  | 25  | 25  | 21  | 18  | 14  | 14  | 219            | 12    | 12    |
| Kuruman.....                          | 2000          | 15  | 15  | 18  | 24  | 27  | 27  | 28  | 29  | 26  | 24  | 17  | 16  | 263            | 9-11  | 9-11  |
| Lydenburg.....                        | 2000          | 5   | 11  | 17  | 14  | 20  | 24  | 25  | 26  | 25  | 18  | 8   | 11  | 210            | 5-6   | 5-6   |
| Macoville.....                        | 2000          | 14  | 12  | 21  | 21  | 30  | 22  | 27  | 26  | 22  | 18  | 20  | 25  | 258            | 2-3   | 2-3   |
| Mafeking.....                         | 2000          | 9   | 11  | 17  | 18  | 25  | 24  | 27  | 28  | 23  | 18  | 12  | 11  | 225            | 9-10  | 9-10  |
| Marnitz.....                          | 2000          | 14  | 15  | 22  | 21  | 24  | 22  | 24  | 25  | 23  | 20  | 16  | 15  | 241            | 11-12 | 10-12 |
| Matroosberg.....                      | 1900          | 20  | 21  | 21  | 20  | 21  | 20  | 22  | 23  | 21  | 19  | 19  | 21  | 245            | 10-11 | 10-11 |
| Middelburg.....                       | 2000          | 17  | 18  | 18  | 18  | 21  | 23  | 26  | 26  | 22  | 20  | 19  | 17  | 244            | 10-11 | 10-11 |

Footnote at end of table.

FIGURE 80. DAYS WITH TOTAL CLOUD COVER  $\frac{1}{2}$  OR LESS AND VISIBILITY  $\frac{3}{4}$  MILES OR GREATER (Continued)

| COUNTRY AND STATION                   | HOUR<br>(LST) |     |     |     |     |     |     |     |     |     |     |     |     | DATA BASE INFO |       |       |
|---------------------------------------|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|-------|-------|
|                                       |               | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANN            | FOR   | CYR   |
| Republic of South Africa (Continued): |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |
| Okiep.....                            | 1900          | 25  | 23  | 24  | 24  | 24  | 23  | 24  | 24  | 25  | 23  | 24  | 25  | 259            | 12-13 | 12-13 |
| Phalaborwa.....                       | 2000          | 16  | 16  | 22  | 20  | 27  | 26  | 26  | 26  | 24  | 20  | 14  | 14  | 251            | 9-10  | 9-10  |
| Pietersburg.....                      | 2000          | 15  | 15  | 21  | 20  | 27  | 24  | 27  | 28  | 25  | 20  | 12  | 13  | 247            | 12    | 12    |
| Piet Retief.....                      | 2000          | 11  | 12  | 16  | 18  | 25  | 24  | 26  | 24  | 20  | 13  | 9   | 10  | 208            | 11-12 | 10-11 |
| Port Elizabeth.....                   | 2000          | 11  | 11  | 12  | 15  | 16  | 18  | 18  | 16  | 14  | 12  | 10  | 12  | 164            | 12    | 12    |
| Port Saint Johns.....                 | 2000          | 4   | 6   | 8   | 12  | 17  | 20  | 20  | 17  | 11  | 8   | 6   | 5   | 132            | 12    | 11-12 |
| Queenstown.....                       | 2000          | 10  | 11  | 13  | 16  | 20  | 22  | 23  | 23  | 20  | 13  | 11  | 12  | 194            | 8-9   | 8-9   |
| Sheeprun.....                         | 2000          | 3   | 7   | 10  | 14  | 20  | 22  | 23  | 22  | 18  | 10  | 8   | 7   | 164            | 5-6   | 5-6   |
| Uptington.....                        | 1900          | 18  | 17  | 19  | 23  | 24  | 25  | 26  | 27  | 23  | 21  | 18  | 20  | 259            | 12    | 12    |
| Wepener.....                          | 2000          | 12  | 14  | 16  | 19  | 24  | 24  | 25  | 26  | 22  | 19  | 15  | 14  | 239            | 12-13 | 12-13 |
| Willowmore.....                       | 2000          | 23  | 21  | 20  | 23  | 24  | 26  | 26  | 26  | 23  | 21  | 22  | 25  | 278            | 8-9   | 7-9   |
| South-West Africa:                    |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |
| Gobabis.....                          | 1900          | 14  | 15  | 18  | 22  | 28  | 28  | 30  | 30  | 26  | 22  | 15  | 17  | 255            | 8     | 8     |
| Keetmanshoop.....                     | 1900          | 16  | 15  | 18  | 22  | 25  | 25  | 27  | 27  | 22  | 20  | 18  | 18  | 252            | 9-10  | 9-10  |
| Mariental.....                        | 1900          | 16  | 14  | 19  | 23  | 29  | 27  | 28  | 28  | 25  | 22  | 18  | 20  | 270            | 8     | 8     |
| Outjo.....                            | 1900          | 9   | 9   | 10  | 19  | 25  | 25  | 29  | 28  | 26  | 21  | 13  | 13  | 234            | 8     | 8     |
| Windhoek.....                         | 1900          | 8   | 8   | 9   | 17  | 25  | 26  | 28  | 26  | 22  | 19  | 12  | 10  | 205            | 8     | 8     |

\* &lt; 0.5 day.

FIGURE 51. PERCENTAGE FREQUENCY OF SPECIFIED CEILING AND VISIBILITY COMBINATIONS AT SPECIFIED HOURS  
(Ceiling defined as  $\frac{1}{2}$  or more cloud cover)

| COUNTRY AND STATIONS        |        | HOURS<br>(LST) | DATA BASE INFO |     |     |     |     |     |     |     |     |     |     |     |       |       |
|-----------------------------|--------|----------------|----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|-------|
|                             |        |                | JAN            | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | APR   | FOR   |
| Botswana:                   |        |                |                |     |     |     |     |     |     |     |     |     |     |     |       |       |
| Francistown.....            | 0800 A | 95             | 92             | 97  | 96  | 97  | 95  | 97  | 97  | 95  | 97  | 98  | 92  | 97  | 6     | 6     |
|                             | B      | 0              | 0              | 0   | 0   | 0   | 0   | 0   | 1   | 1   | 1   | 1   | 2   | 0   | 0     | 0     |
| Gaborone.....               | 0800 A | 100            | 99             | 98  | 97  | 100 | 100 | 100 | 100 | 100 | 100 | 99  | 100 | 99  | 7     | 6-7   |
|                             | B      | 0              | 0              | 0   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0     | 0     |
| Ghanzi.....                 | 0700 A | 100            | 100            | 100 | 100 | 99  | 100 | 100 | 100 | 99  | 100 | 99  | 99  | 100 | 6     | 6     |
|                             | B      | 0              | 0              | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0     | 0     |
| Maua.....                   | 0800 A | 95             | 95             | 95  | 99  | 100 | 100 | 100 | 99  | 95  | 97  | 97  | 94  | 97  | 5     | 5     |
|                             | B      | 1              | 1              | 2   | 0   | 0   | 0   | 0   | 0   | 1   | 1   | 2   | 1   | 1   | 3     | 3     |
| Shakawe.....                | 0700 A | 100            | 100            | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 99  | 100 | 5     | 5     |
|                             | B      | 0              | 0              | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0     | 0     |
| Tloabong.....               | 0700 A | 99             | 100            | 99  | 95  | 100 | 100 | 99  | 100 | 99  | 100 | 100 | 100 | 100 | 6-7   | 6-7   |
|                             | B      | 0              | 0              | 1   | 1   | 0   | 0   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0     | 0     |
| Tloane.....                 | 0700 A | 99             | 100            | 100 | 100 | 99  | 95  | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 6     | 6     |
|                             | B      | 1              | 0              | 0   | 0   | 0   | 2   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0     | 0     |
| Republic of South Africa:   |        |                |                |     |     |     |     |     |     |     |     |     |     |     |       |       |
| Alexander Bay.....          | 0700 A | 78             | 67             | 62  | 71  | 71  | 89  | 75  | 76  | 73  | 85  | 84  | 81  | 75  | 12    | 12    |
|                             | B      | 12             | 22             | 32  | 24  | 27  | 13  | 22  | 19  | 20  | 7   | 7   | 12  | 18  | 11-12 | 11-12 |
| Bonifort West.....          | 0800 A | 99             | 96             | 94  | 94  | 97  | 95  | 95  | 97  | 95  | 96  | 97  | 99  | 96  | 11-12 | 11-12 |
|                             | B      | 0              | 1              | 5   | 5   | 4   | 3   | 4   | 3   | 4   | 1   | 2   | 1   | 3   | 10-11 | 10-11 |
| Bethlehem.....              | 0800 A | 87             | 83             | 75  | 77  | 78  | 83  | 88  | 83  | 83  | 91  | 85  | 91  | 83  | 7     | 7     |
|                             | B      | 3              | 6              | 8   | 12  | 12  | 10  | 10  | 7   | 2   | 3   | 5   | 3   | 7   | 12    | 12    |
| Calvinia.....               | 0700 A | 100            | 96             | 95  | 95  | 95  | 95  | 95  | 97  | 95  | 95  | 99  | 100 | 97  | 12    | 12    |
|                             | B      | 0              | 3              | 3   | 4   | 3   | 4   | 4   | 2   | 3   | 2   | 0   | 0   | 2   | 12    | 12    |
| Cape Agulhas.....           | 0700 A | 95             | 91             | 90  | 88  | 91  | 91  | 92  | 91  | 93  | 89  | 91  | 94  | 91  | 12    | 12    |
|                             | B      | 1              | 4              | 5   | 4   | 3   | 3   | 3   | 2   | 2   | 2   | 3   | 2   | 3   | 12    | 12    |
| Cape Columbine.....         | 0700 A | 77             | 77             | 76  | 77  | 77  | 81  | 82  | 85  | 81  | 82  | 82  | 80  | 79  | 12    | 12    |
|                             | B      | 19             | 20             | 27  | 20  | 13  | 13  | 11  | 7   | 10  | 10  | 14  | 16  | 15  | 11    | 11    |
| Cape Saint Lucia.....       | 0800 A | 85             | 84             | 87  | 85  | 93  | 90  | 88  | 88  | 89  | 78  | 78  | 85  | 85  | 11    | 11    |
|                             | B      | 2              | 4              | 2   | 4   | 2   | 3   | 5   | 2   | 5   | 4   | 2   | 2   | 3   | 11-12 | 11-12 |
| Cape Town/D.F. Mahan.....   | 0700 A | 96             | 94             | 91  | 83  | 95  | 83  | 87  | 90  | 93  | 83  | 85  | 96  | 91  | 11-12 | 11-12 |
|                             | B      | 1              | 5              | 7   | 10  | 9   | 11  | 10  | 6   | 4   | 3   | 3   | 1   | 6   | 10-11 | 10-11 |
| De Aar.....                 | 0800 A | 99             | 95             | 95  | 99  | 99  | 77  | 81  | 84  | 95  | 95  | 100 | 99  | 92  | 11-12 | 11-12 |
|                             | B      | 0              | 1              | 3   | 5   | 14  | 16  | 14  | 11  | 2   | 2   | 1   | 0   | 0   | 10-11 | 10-11 |
| Durban/Lewis Beka.....      | 0800 A | 94             | 95             | 95  | 95  | 97  | 93  | 91  | 90  | 92  | 94  | 94  | 92  | 94  | 11-12 | 11-12 |
|                             | B      | 1              | 1              | 1   | 0   | 0   | 0   | 0   | 2   | 1   | 2   | 2   | 2   | 1   | 12    | 12    |
| East London.....            | 0800 A | 86             | 85             | 87  | 92  | 95  | 89  | 97  | 97  | 92  | 85  | 84  | 86  | 91  | 11    | 11    |
|                             | B      | 8              | 7              | 7   | 5   | 1   | 0   | 1   | 1   | 4   | 8   | 9   | 7   | 5   | 11    | 11    |
| Edenport.....               | 0800 A | 90             | 96             | 95  | 95  | 95  | 95  | 97  | 96  | 97  | 97  | 96  | 99  | 96  | 12    | 12    |
|                             | B      | 1              | 2              | 1   | 2   | 2   | 2   | 1   | 1   | 0   | 0   | 1   | 1   | 1   | 12    | 12    |
| Johannesburg/Jan Smuts..... | 0800 A | 79             | 82             | 81  | 78  | 84  | 85  | 85  | 87  | 89  | 85  | 82  | 79  | 83  | 9     | 9     |
|                             | B      | 11             | 9              | 11  | 14  | 16  | 9   | 8   | 7   | 8   | 7   | 7   | 10  | 9   | 12    | 12    |

Footnotes at end of table.

FIGURE 51. FREQUENCY OF SPECIFIED CEILING AND VISIBILITY COMBINATIONS (Continued)

| COUNTRY AND STATION                   | ELEVATION<br>(FEET) | MONTH |     |     |     |     |     |     |     |     |     |     |     | DATA BASE INFO |       |       |
|---------------------------------------|---------------------|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|-------|-------|
|                                       |                     | JAN   | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANN            | PER   | DATE  |
| Republic of South Africa (Continued): |                     |       |     |     |     |     |     |     |     |     |     |     |     |                |       |       |
| Kimberley.....                        | 6000 A              | 95    | 99  | 95  | 97  | 95  | 95  | 95  | 94  | 95  | 99  | 99  | 99  | 95             | 12    | 12    |
| .....                                 | B                   | 1     | 1   | 1   | 1   | 3   | 1   | 1   | 1   | 0   | 0   | 0   | 0   | 1              |       |       |
| Karman.....                           | 6000 A              | 99    | 95  | 95  | 95  | 99  | 99  | 100 | 100 | 100 | 99  | 95  | 100 | 99             | 9-11  | 9-11  |
| .....                                 | B                   | 0     | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0              |       |       |
| Lyonsburg.....                        | 6000 A              | 77    | 89  | 83  | 84  | 91  | 97  | 97  | 95  | 95  | 94  | 84  | 91  | 90             | 5-6   | 5-6   |
| .....                                 | B                   | 3     | 0   | 0   | 0   | 1   | 1   | 0   | 0   | 0   | 1   | 2   | 1   | 1              |       |       |
| Macville.....                         | 6000 A              | 100   | 95  | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 99  | 100            | 2-3   | 2-3   |
| .....                                 | B                   | 0     | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0              |       |       |
| Mafeking.....                         | 6000 A              | 99    | 99  | 99  | 95  | 99  | 100 | 99  | 95  | 95  | 95  | 99  | 130 | 95             | 9-10  | 9-10  |
| .....                                 | B                   | 0     | 0   | 0   | 1   | 0   | 0   | 0   | 2   | 2   | 2   | 1   | 0   | 1              |       |       |
| Marmitz.....                          | 6000 A              | 100   | 95  | 99  | 95  | 95  | 94  | 95  | 95  | 97  | 99  | 100 | 99  | 93             | 11-12 | 10-12 |
| .....                                 | B                   | 0     | 1   | 0   | 0   | 0   | 0   | 1   | 2   | 0   | 0   | 0   | 1   | 0              |       |       |
| Matroosburg.....                      | 6700 A              | 90    | 90  | 85  | 84  | 84  | 83  | 85  | 82  | 83  | 84  | 91  | 94  | 87             | 10-11 | 10-11 |
| .....                                 | B                   | 4     | 1   | 3   | 6   | 7   | 4   | 3   | 4   | 4   | 4   | 2   | 2   | 4              |       |       |
| Middelburg.....                       | 6000 A              | 89    | 85  | 84  | 89  | 85  | 94  | 94  | 83  | 83  | 85  | 91  | 85  | 92             | 11    | 10-11 |
| .....                                 | B                   | 4     | 6   | 9   | 5   | 3   | 4   | 5   | 2   | 4   | 1   | 2   | 1   | 4              |       |       |
| Onkap.....                            | 6700 A              | 95    | 95  | 95  | 95  | 92  | 89  | 91  | 85  | 91  | 92  | 87  | 95  | 94             | 12-13 | 12-13 |
| .....                                 | B                   | 1     | 0   | 1   | 1   | 2   | 5   | 3   | 4   | 2   | 2   | 0   | 0   | 2              |       |       |
| Phalaborwa.....                       | 6000 A              | 83    | 89  | 85  | 79  | 85  | 91  | 92  | 89  | 85  | 91  | 84  | 84  | 87             | 9-10  | 9-10  |
| .....                                 | B                   | 7     | 11  | 6   | 9   | 5   | 5   | 3   | 4   | 5   | 4   | 7   | 7   | 6              |       |       |
| Pieterburg.....                       | 6000 A              | 92    | 91  | 93  | 85  | 91  | 83  | 82  | 94  | 83  | 91  | 82  | 90  | 91             | 12    | 12    |
| .....                                 | B                   | 0     | 2   | 1   | 3   | 4   | 8   | 4   | 3   | 1   | 3   | 2   | 1   | 3              |       |       |
| Port Natal.....                       | 6000 A              | 72    | 65  | 64  | 69  | 81  | 81  | 77  | 73  | 70  | 71  | 71  | 77  | 73             | 10-12 | 10-12 |
| .....                                 | B                   | 12    | 12  | 12  | 11  | 8   | 8   | 7   | 11  | 13  | 13  | 13  | 8   | 11             |       |       |
| Port Elizabeth.....                   | 6000 A              | 92    | 94  | 85  | 85  | 94  | 93  | 90  | 90  | 91  | 91  | 83  | 94  | 92             | 12    | 12    |
| .....                                 | B                   | 5     | 4   | 5   | 5   | 3   | 2   | 5   | 4   | 4   | 6   | 5   | 4   | 4              |       |       |
| Port Saint Johns.....                 | 6000 A              | 94    | 95  | 95  | 95  | 95  | 99  | 95  | 95  | 97  | 94  | 95  | 95  | 97             | 12    | 12    |
| .....                                 | B                   | 2     | 2   | 1   | 0   | 0   | 1   | 0   | 1   | 1   | 2   | 1   | 2   | 1              |       |       |
| Queenstown.....                       | 6000 A              | 82    | 73  | 74  | 76  | 81  | 82  | 82  | 83  | 81  | 85  | 87  | 94  | 82             | 9-11  | 9-11  |
| .....                                 | B                   | 5     | 8   | 8   | 10  | 10  | 13  | 13  | 10  | 10  | 10  | 10  | 2   | 8              |       |       |
| Shepparton.....                       | 6000 A              | 90    | 91  | 83  | 85  | 85  | 83  | 83  | 82  | 80  | 84  | 80  | 94  | 95             | 5-6   | 5-6   |
| .....                                 | B                   | 3     | 4   | 10  | 9   | 3   | 3   | 5   | 5   | 7   | 7   | 6   | 2   | 6              |       |       |
| Uppington.....                        | 6700 A              | 100   | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100            | 12    | 12    |
| .....                                 | B                   | 0     | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0              |       |       |
| Wepener.....                          | 6000 A              | 99    | 95  | 95  | 93  | 91  | 75  | 71  | 80  | 95  | 90  | 97  | 99  | 92             | 12-13 | 12-13 |
| .....                                 | B                   | 1     | 2   | 1   | 4   | 2   | 5   | 7   | 4   | 0   | 1   | 1   | 1   | 2              |       |       |
| Willmerton.....                       | 6000 A              | 95    | 92  | 87  | 89  | 90  | 95  | 92  | 92  | 99  | 95  | 97  | 95  | 95             | 8-9   | 8-9   |
| .....                                 | B                   | 1     | 3   | 5   | 6   | 6   | 3   | 3   | 3   | 4   | 2   | 1   | 0   | 3              |       |       |
| South-West Africa:                    |                     |       |     |     |     |     |     |     |     |     |     |     |     |                |       |       |
| Gobabis.....                          | 6700 A              | 100   | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100            | 8     | 8     |
| .....                                 | B                   | 0     | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0              |       |       |
| Kommersburg.....                      | 6700 A              | 100   | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100            | 9-10  | 9-10  |
| .....                                 | B                   | 0     | 0   | 0   | 0   | 0   | 1   | 0   | 1   | 0   | 0   | 0   | 0   | 0              |       |       |



[illegible]

**FIGURE 51. FREQUENCY OF SPECIFIED CEILING AND VISIBILITY COMBINATIONS (Continued);**

| COUNTRY AND STATION                   | MOON <sup>o</sup><br>(LMT) | DATA BASE INFO |     |     |     |     |     |     |     |     |     |     |     |     |       |       |
|---------------------------------------|----------------------------|----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|-------|
|                                       |                            | JAN            | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AYS | POS   | CTR   |
| Republic of South Africa (Continued): |                            |                |     |     |     |     |     |     |     |     |     |     |     |     |       |       |
| Kimberley.....                        | 1400 A                     | 90             | 90  | 90  | 90  | 90  | 90  | 100 | 100 | 90  | 90  | 90  | 90  | 90  | 12    | 12    |
| Kimberley.....                        | B                          | 1              | 1   | 1   | 1   | 0   | 0   | 0   | 0   | 0   | 1   | 1   | 0   | 0   | 0     | 0     |
| Kuruman.....                          | 1400 A                     | 100            | 90  | 90  | 90  | 100 | 90  | 100 | 100 | 100 | 100 | 90  | 100 | 90  | 9-11  | 9-11  |
| Kuruman.....                          | B                          | 0              | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0     | 0     |
| Lydenburg.....                        | 1400 A                     | 94             | 90  | 90  | 90  | 90  | 90  | 100 | 100 | 100 | 90  | 90  | 90  | 90  | 5-6   | 5-6   |
| Lydenburg.....                        | B                          | 1              | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 2   | 1   | 0   | 0     | 0     |
| Macaville.....                        | 1400 A                     | 100            | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 2-3   | 2-3   |
| Macaville.....                        | B                          | 0              | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0     | 0     |
| Mafeking.....                         | 1400 A                     | 90             | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 9-10  | 9-10  |
| Mafeking.....                         | B                          | 0              | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 1   | 1   | 0   | 0   | 0     | 0     |
| Mariuska.....                         | 1400 A                     | 100            | 90  | 90  | 90  | 90  | 90  | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 11-12 | 10-11 |
| Mariuska.....                         | B                          | 0              | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0     | 0     |
| Matreberg.....                        | 1300 A                     | 100            | 90  | 90  | 90  | 90  | 90  | 90  | 90  | 90  | 90  | 90  | 90  | 90  | 10-11 | 10-11 |
| Matreberg.....                        | B                          | 0              | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0     | 0     |
| Middelburg.....                       | 1400 A                     | 90             | 90  | 90  | 90  | 90  | 90  | 90  | 90  | 90  | 90  | 90  | 90  | 90  | 11    | 10-11 |
| Middelburg.....                       | B                          | 1              | 2   | 1   | 1   | 1   | 0   | 1   | 1   | 0   | 0   | 2   | 1   | 1   | 1     | 1     |
| Okeup.....                            | 1300 A                     | 100            | 100 | 90  | 90  | 90  | 94  | 95  | 95  | 95  | 97  | 90  | 90  | 90  | 12-13 | 12-13 |
| Okeup.....                            | B                          | 0              | 0   | 0   | 1   | 0   | 2   | 2   | 2   | 2   | 0   | 0   | 0   | 0   | 1     | 1     |
| Phalaborwa.....                       | 1400 A                     | 90             | 90  | 90  | 90  | 90  | 90  | 90  | 90  | 90  | 90  | 90  | 90  | 90  | 9-10  | 9-10  |
| Phalaborwa.....                       | B                          | 2              | 1   | 1   | 2   | 0   | 0   | 1   | 1   | 1   | 1   | 3   | 3   | 1   | 1     | 1     |
| Pieterburg.....                       | 1400 A                     | 90             | 90  | 100 | 90  | 100 | 90  | 90  | 100 | 90  | 90  | 90  | 90  | 90  | 12    | 12    |
| Pieterburg.....                       | B                          | 0              | 0   | 0   | 0   | 0   | 0   | 1   | 0   | 0   | 1   | 0   | 1   | 0   | 0     | 0     |
| Piet Retief.....                      | 1400 A                     | 91             | 90  | 90  | 90  | 90  | 90  | 90  | 90  | 90  | 90  | 90  | 90  | 90  | 10-11 | 9-11  |
| Piet Retief.....                      | B                          | 4              | 2   | 3   | 3   | 1   | 2   | 2   | 2   | 3   | 3   | 3   | 4   | 3   | 3     | 3     |
| Port Elizabeth.....                   | 1400 A                     | 90             | 90  | 90  | 90  | 90  | 90  | 90  | 90  | 90  | 90  | 90  | 90  | 90  | 12    | 12    |
| Port Elizabeth.....                   | B                          | 2              | 2   | 4   | 2   | 2   | 2   | 1   | 1   | 2   | 2   | 2   | 1   | 2   | 2     | 2     |
| Port Saint Johns.....                 | 1400 A                     | 90             | 90  | 90  | 90  | 90  | 100 | 100 | 100 | 90  | 90  | 90  | 90  | 90  | 12    | 12    |
| Port Saint Johns.....                 | B                          | 1              | 1   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 1   | 1   | 0   | 0   | 0     | 0     |
| Queenstown.....                       | 1400 A                     | 97             | 90  | 90  | 90  | 90  | 90  | 90  | 90  | 90  | 90  | 90  | 90  | 90  | 9-11  | 8-11  |
| Queenstown.....                       | B                          | 0              | 0   | 1   | 1   | 1   | 2   | 1   | 0   | 1   | 1   | 1   | 1   | 1   | 1     | 1     |
| Sheepcrum.....                        | 1400 A                     | 97             | 90  | 90  | 90  | 90  | 90  | 90  | 90  | 90  | 90  | 90  | 90  | 90  | 5-6   | 5-6   |
| Sheepcrum.....                        | B                          | 1              | 0   | 1   | 0   | 0   | 0   | 1   | 1   | 0   | 1   | 0   | 1   | 0   | 0     | 0     |
| Uptington.....                        | 1300 A                     | 100            | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 12    | 12    |
| Uptington.....                        | B                          | 0              | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 1   | 0   | 0   | 0   | 0     | 0     |
| Walvis Bay.....                       | 1300 A                     | 90             | 90  | 90  | 90  | 90  | 90  | 90  | 90  | 90  | 90  | 90  | 90  | 90  | 7-8   | 5-6   |
| Walvis Bay.....                       | B                          | 2              | 1   | 0   | 12  | 19  | 8   | 12  | 6   | 3   | 2   | 2   | 2   | 7   | 7     | 7     |
| Weyers.....                           | 1400 A                     | 90             | 90  | 90  | 90  | 90  | 90  | 90  | 90  | 90  | 90  | 90  | 90  | 90  | 12-13 | 12-13 |
| Weyers.....                           | B                          | 0              | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0     | 0     |
| Willmors.....                         | 1400 A                     | 100            | 90  | 90  | 90  | 90  | 90  | 90  | 90  | 90  | 100 | 100 | 100 | 90  | 8-9   | 7-9   |
| Willmors.....                         | B                          | 0              | 0   | 0   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0     | 0     |
| South West Africa:                    |                            |                |     |     |     |     |     |     |     |     |     |     |     |     |       |       |
| Gobabis.....                          | 1300 A                     | 100            | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 8     | 8     |
| Gobabis.....                          | B                          | 0              | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0     | 0     |



FIGURE 51. FREQUENCY OF SPECIFIED CEILING AND VISIBILITY COMBINATIONS (Continued)

| COUNTRY AND STATIONS                  |        | MOON <sup>a</sup><br>(LMT) | DATA BASE INFO |     |     |     |     |     |     |     |     |     |     |     |       |       |      |  |
|---------------------------------------|--------|----------------------------|----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|-------|------|--|
|                                       |        |                            | JLS            | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANY   | POZ   | CYE  |  |
| Republic of South Africa (Continued): |        |                            |                |     |     |     |     |     |     |     |     |     |     |     |       |       |      |  |
| Johannesburg Jan Smuts                | 2000 A | 97                         | 95             | 93  | 95  | 99  | 97  | 99  | 99  | 97  | 95  | 95  | 95  | 95  | 95    | 12    | 12   |  |
| Kimberley                             | 2000 A | 100                        | 100            | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100   | 12    | 12   |  |
| Karman                                | 2000 A | 99                         | 99             | 99  | 99  | 99  | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100   | 9-11  | 9-11 |  |
| Lydenburg                             | 2000 A | 99                         | 97             | 97  | 95  | 99  | 95  | 100 | 99  | 95  | 95  | 95  | 95  | 97  | 5-6   | 5-6   |      |  |
| Macquarie                             | 2000 A | 100                        | 100            | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 2-3   | 2-3   |      |  |
| Mafeking                              | 2000 A | 97                         | 95             | 95  | 95  | 95  | 95  | 95  | 95  | 95  | 95  | 95  | 95  | 95  | 9-10  | 9-10  |      |  |
| Marrick                               | 2000 A | 99                         | 94             | 94  | 94  | 91  | 94  | 92  | 92  | 92  | 92  | 92  | 92  | 94  | 11-12 | 11-12 |      |  |
| Matroosberg                           | 1900 A | 95                         | 95             | 95  | 95  | 95  | 95  | 95  | 95  | 95  | 95  | 95  | 95  | 95  | 10-11 | 10-11 |      |  |
| Middelburg                            | 2000 A | 95                         | 95             | 95  | 95  | 95  | 95  | 95  | 95  | 95  | 95  | 95  | 95  | 95  | 10-11 | 10-11 |      |  |
| Oliver                                | 1900 A | 100                        | 100            | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 12-13 | 12-13 |      |  |
| Phakama                               | 2000 A | 94                         | 95             | 95  | 95  | 95  | 95  | 95  | 95  | 95  | 95  | 95  | 95  | 95  | 9-10  | 9-10  |      |  |
| Pretoria                              | 2000 A | 100                        | 100            | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 12    | 12    |      |  |
| Port Natal                            | 2000 A | 75                         | 75             | 75  | 75  | 75  | 75  | 75  | 75  | 75  | 75  | 75  | 75  | 75  | 10-12 | 10-12 |      |  |
| Port Elizabeth                        | 2000 A | 93                         | 93             | 93  | 93  | 95  | 95  | 95  | 95  | 94  | 94  | 95  | 95  | 95  | 12    | 12    |      |  |
| Port Saint John                       | 2000 A | 95                         | 95             | 95  | 95  | 95  | 95  | 95  | 95  | 95  | 95  | 95  | 95  | 95  | 12    | 12    |      |  |
| Queenstown                            | 2000 A | 97                         | 92             | 92  | 92  | 92  | 92  | 92  | 92  | 92  | 92  | 92  | 92  | 92  | 8-9   | 8-9   |      |  |
| Sheepen                               | 2000 A | 85                         | 94             | 93  | 91  | 97  | 99  | 99  | 99  | 99  | 99  | 99  | 99  | 99  | 5-6   | 5-6   |      |  |
| Ugungu                                | 1900 A | 99                         | 100            | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 12    | 12    |      |  |
| Worcester                             | 2000 A | 96                         | 97             | 95  | 97  | 100 | 95  | 95  | 95  | 95  | 95  | 95  | 95  | 95  | 12-13 | 12-13 |      |  |
| Willowmoor                            | 2000 A | 99                         | 100            | 97  | 95  | 95  | 95  | 95  | 95  | 95  | 95  | 95  | 95  | 95  | 8-9   | 8-9   |      |  |
| South-West Africa:                    |        |                            |                |     |     |     |     |     |     |     |     |     |     |     |       |       |      |  |
| Coblenz                               | 1900 A | 100                        | 100            | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 8     | 8     |      |  |



FIGURE 52. MEAN NUMBER OF DAYS WITH LOW CLOUD AMOUNT 0 TO  $\frac{1}{8}$ , OR CEILING 1,000 FEET OR GREATER, VISIBILITY  $\frac{1}{2}$  MILES OR GREATER, AND SURFACE WIND SPEED 10 KNOTS OR LESS, AT SPECIFIED HOURS

(Ceiling defined as  $\frac{1}{8}$  or more cloud cover)

|                             |               |     |     |     |     |     |     |     |     |     |     |     |     | DATA BASE INFO |       |       |
|-----------------------------|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|-------|-------|
| COUNTRY AND STATION         | HOUR<br>(GMT) | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANN            |       |       |
|                             |               |     |     |     |     |     |     |     |     |     |     |     |     |                | FOR   | CYR   |
| Botswana:                   |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |
| Francistown.....            | 0800          | 23  | 19  | 23  | 25  | 28  | 28  | 28  | 24  | 20  | 17  | 21  | 20  | 274            | 6     | 6     |
| Gaborone.....               | 0800          | 27  | 20  | 28  | 7   | 31  | 30  | 31  | 30  | 25  | 24  | 25  | 29  | 333            | 7     | 6-7   |
| Ghanzi.....                 | 0700          | 25  | 24  | 27  | 28  | 29  | 29  | 30  | 28  | 22  | 18  | 21  | 24  | 303            | 6     | 6     |
| Maun.....                   | 0800          | 29  | 26  | 29  | 30  | 31  | 29  | 31  | 30  | 25  | 23  | 25  | 27  | 333            | 9     | 9     |
| Shakawe.....                | 0700          | 30  | 27  | 29  | 27  | 29  | 29  | 31  | 30  | 29  | 29  | 27  | 29  | 346            | 5     | 5     |
| Tsabong.....                | 0700          | 24  | 24  | 29  | 28  | 30  | 29  | 30  | 29  | 24  | 22  | 24  | 21  | 313            | 6-7   | 6-7   |
| Tsane.....                  | 0700          | 26  | 25  | 27  | 28  | 30  | 29  | 30  | 28  | 25  | 24  | 23  | 24  | 317            | 6     | 6     |
| Republic of South Africa:   |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |
| Alexander Bay.....          | 0700          | 21  | 17  | 18  | 20  | 19  | 19  | 19  | 21  | 20  | 23  | 21  | 21  | 239            | 12    | 12    |
| Beaufort West.....          | 0800          | 25  | 24  | 25  | 24  | 24  | 20  | 23  | 23  | 23  | 23  | 24  | 26  | 283            | 11-12 | 11-12 |
| Bethlehem.....              | 0800          | 23  | 21  | 21  | 22  | 24  | 24  | 24  | 25  | 22  | 24  | 22  | 24  | 276            | 10-11 | 10-11 |
| Calvinia.....               | 0700          | 30  | 29  | 29  | 27  | 28  | 24  | 27  | 26  | 27  | 28  | 27  | 28  | 329            | 12    | 12    |
| Cape Agulhas.....           | 0700          | 18  | 14  | 15  | 15  | 18  | 17  | 17  | 18  | 13  | 13  | 12  | 14  | 182            | 12    | 12    |
| Cape Columbine.....         | 0700          | 13  | 14  | 14  | 16  | 17  | 15  | 17  | 17  | 14  | 15  | 13  | 11  | 175            | 12    | 12    |
| Cape Saint Lucia.....       | 0800          | 16  | 15  | 16  | 13  | 12  | 10  | 9   | 10  | 10  | 12  | 13  | 16  | 151            | 11    | 11    |
| Cape Town/D.F. Malan.....   | 0700          | 21  | 20  | 23  | 23  | 20  | 20  | 22  | 22  | 22  | 22  | 18  | 19  | 252            | 11-12 | 11-12 |
| De Aar.....                 | 0800          | 24  | 23  | 26  | 25  | 24  | 22  | 25  | 24  | 25  | 24  | 24  | 24  | 291            | 10-11 | 10-11 |
| Durban/Louis Botha.....     | 0800          | 22  | 21  | 25  | 26  | 29  | 26  | 27  | 24  | 20  | 19  | 19  | 10  | 276            | 11-12 | 11-12 |
| East London.....            | 0800          | 18  | 14  | 19  | 18  | 18  | 17  | 17  | 17  | 16  | 13  | 14  | 15  | 192            | 12    | 12    |
| Edacourt.....               | 0800          | 30  | 27  | 29  | 28  | 29  | 28  | 29  | 28  | 28  | 29  | 28  | 29  | 343            | 11    | 11    |
| Johannesburg/Jan Smuts..... | 0800          | 19  | 18  | 22  | 21  | 24  | 23  | 24  | 23  | 17  | 15  | 17  | 17  | 241            | 12    | 12    |
| Kimberley.....              | 0800          | 17  | 20  | 23  | 23  | 26  | 24  | 23  | 20  | 19  | 16  | 16  | 15  | 240            | 12    | 12    |
| Kuruman.....                | 0800          | 30  | 27  | 30  | 29  | 30  | 29  | 30  | 30  | 29  | 20  | 23  | 30  | 349            | 9-11  | 9-11  |
| Lydenburg.....              | 0800          | 24  | 24  | 27  | 25  | 28  | 29  | 30  | 30  | 29  | 28  | 25  | 28  | 325            | 5-6   | 5-6   |
| Macquarie.....              | 0800          | 23  | 21  | 27  | 25  | 31  | 30  | 30  | 27  | 24  | 20  | 20  | 23  | 289            | 2-3   | 2-3   |
| Mafeking.....               | 0800          | 22  | 22  | 24  | 25  | 28  | 29  | 29  | 25  | 19  | 16  | 18  | 21  | 277            | 9-10  | 9-10  |
| Marrits.....                | 0800          | 24  | 22  | 24  | 24  | 27  | 26  | 27  | 25  | 17  | 14  | 17  | 21  | 269            | 11-12 | 10-12 |
| Matroosberg.....            | 0700          | 23  | 22  | 24  | 24  | 24  | 24  | 24  | 23  | 22  | 20  | 22  | 24  | 276            | 10-11 | 10-11 |
| Middelburg.....             | 0800          | 25  | 23  | 24  | 25  | 27  | 25  | 26  | 24  | 24  | 25  | 24  | 27  | 299            | 11    | 10-11 |
| Okiep.....                  | 0700          | 29  | 26  | 28  | 26  | 27  | 23  | 26  | 24  | 24  | 25  | 25  | 25  | 310            | 12-13 | 11-13 |
| Phalaborwa.....             | 0800          | 24  | 20  | 26  | 22  | 27  | 26  | 28  | 25  | 23  | 25  | 22  | 24  | 292            | 10    | 9-10  |
| Pietersburg.....            | 0800          | 25  | 24  | 27  | 25  | 27  | 25  | 27  | 28  | 24  | 22  | 22  | 23  | 290            | 12    | 12    |
| Piet Retief.....            | 0800          | 22  | 18  | 20  | 21  | 25  | 23  | 24  | 23  | 21  | 22  | 21  | 23  | 262            | 11-12 | 10-12 |
| Port Elizabeth.....         | 0800          | 20  | 18  | 22  | 22  | 25  | 25  | 24  | 22  | 19  | 17  | 16  | 18  | 246            | 12    | 12    |
| Port Saint John.....        | 0800          | 23  | 22  | 27  | 26  | 26  | 24  | 25  | 25  | 24  | 22  | 22  | 23  | 290            | 12    | 12    |
| Queenstown.....             | 0800          | 25  | 22  | 22  | 21  | 23  | 22  | 22  | 22  | 22  | 24  | 25  | 25  | 279            | 9-11  | 9-11  |
| Sheeprun.....               | 0800          | 28  | 25  | 26  | 25  | 29  | 27  | 28  | 28  | 26  | 25  | 27  | 29  | 323            | 5-6   | 5-6   |
| Uppington.....              | 0700          | 23  | 24  | 27  | 26  | 28  | 25  | 25  | 25  | 24  | 22  | 20  | 22  | 290            | 12    | 12    |
| Wepener.....                | 0800          | 22  | 22  | 24  | 23  | 24  | 19  | 10  | 24  | 22  | 22  | 21  | 23  | 265            | 12-13 | 12-13 |
| Willowmore.....             | 0800          | 27  | 23  | 25  | 25  | 27  | 27  | 27  | 27  | 24  | 24  | 25  | 26  | 305            | 8-9   | 8-9   |
| South-West Africa:          |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |
| Gobabis.....                | 0700          | 30  | 27  | 30  | 28  | 31  | 29  | 30  | 29  | 28  | 28  | 28  | 28  | 345            | 8     | 8     |
| Keetmanshoop.....           | 0700          | 26  | 25  | 25  | 22  | 20  | 16  | 16  | 17  | 22  | 21  | 21  | 24  | 255            | 9-10  | 9-10  |
| Mariental.....              | 0700          | 30  | 27  | 31  | 30  | 30  | 30  | 31  | 31  | 29  | 29  | 28  | 24  | 354            | 8     | 8     |
| Outjo.....                  | 0700          | 30  | 28  | 30  | 30  | 31  | 30  | 30  | 31  | 30  | 30  | 29  | 31  | 360            | 8     | 8     |
| Windhoek.....               | 0700          | 28  | 26  | 30  | 29  | 30  | 29  | 29  | 29  | 28  | 28  | 27  | 29  | 340            | 9-10  | 9-10  |
| Botswana:                   |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |
| Francistown.....            | 1400          | 21  | 16  | 22  | 23  | 24  | 24  | 21  | 20  | 18  | 21  | 22  | 20  | 252            | 6     | 6     |
| Gaborone.....               | 1400          | 27  | 26  | 26  | 28  | 27  | 28  | 27  | 24  | 23  | 23  | 25  | 27  | 310            | 6-7   | 5-7   |
| Ghanzi.....                 | 1300          | 24  | 18  | 23  | 22  | 24  | 23  | 23  | 23  | 20  | 18  | 24  | 23  | 263            | 6     | 6     |
| Maun.....                   | 1400          | 29  | 24  | 28  | 29  | 29  | 28  | 29  | 27  | 24  | 25  | 26  | 26  | 326            | 9     | 8-9   |
| Shakawe.....                | 1300          | 28  | 25  | 29  | 27  | 29  | 27  | 27  | 26  | 22  | 26  | 27  | 27  | 321            | 5     | 5     |
| Tsabong.....                | 1300          | 25  | 25  | 26  | 24  | 25  | 24  | 23  | 20  | 20  | 23  | 25  | 25  | 285            | 6-7   | 6-7   |
| Tsane.....                  | 1300          | 27  | 23  | 25  | 26  | 25  | 25  | 25  | 23  | 21  | 25  | 25  | 26  | 294            | 6     | 6     |
| Republic of South Africa:   |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |
| Alexander Bay.....          | 1300          | 3   | 4   | 6   | 10  | 14  | 16  | 15  | 12  | 7   | 4   | 4   | 3   | 97             | 12    | 12    |
| Beaufort West.....          | 1400          | 18  | 18  | 20  | 18  | 18  | 17  | 18  | 16  | 15  | 17  | 17  | 19  | 210            | 11-12 | 11-12 |
| Bethlehem.....              | 1400          | 24  | 22  | 25  | 20  | 22  | 20  | 23  | 19  | 16  | 19  | 21  | 23  | 255            | 10-11 | 10-11 |
| Calvinia.....               | 1300          | 24  | 23  | 26  | 25  | 26  | 23  | 25  | 24  | 22  | 23  | 23  | 24  | 288            | 12    | 11-12 |
| Cape Agulhas.....           | 1300          | 9   | 8   | 10  | 10  | 12  | 14  | 11  | 11  | 8   | 8   | 7   | 9   | 117            | 12    | 12    |
| Cape Columbine.....         | 1300          | 6   | 7   | 9   | 13  | 14  | 13  | 15  | 13  | 10  | 8   | 6   | 5   | 119            | 12    | 12    |
| Cape Saint Lucia.....       | 1400          | 12  | 11  | 12  | 13  | 15  | 17  | 13  | 10  | 9   | 9   | 9   | 12  | 142            | 11    | 10-11 |
| Cape Town/D.F. Malan.....   | 1300          | 9   | 10  | 14  | 17  | 18  | 17  | 17  | 16  | 14  | 12  | 8   | 8   | 158            | 11-12 | 11-12 |

FIGURE 52. DAYS WITH LOW CLOUD AMOUNT 0 TO  $\frac{1}{4}$ , OR CEILING 1,000 FEET OR GREATER, VISIBILITY  $\frac{1}{2}$  MILES OR GREATER, AND SURFACE WIND SPEED 10 KNOTS OR LESS (Continued)

|                                       |               |     |     |     |     |     |     |     |     |     |     |     |     | DATA BASE INFO |       |       |
|---------------------------------------|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|-------|-------|
| COUNTRY AND STATION                   | HOUR<br>(LST) | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANN            |       |       |
|                                       |               |     |     |     |     |     |     |     |     |     |     |     |     |                | FOR   | CYR   |
| Republic of South Africa (Continued): |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |
| De Aar.....                           | 1400          | 22  | 21  | 23  | 21  | 22  | 21  | 22  | 18  | 18  | 19  | 21  | 23  | 251            | 10-11 | 10-11 |
| Durban/Louis Botha.....               | 1400          | 13  | 11  | 11  | 12  | 17  | 18  | 16  | 11  | 9   | 11  | 11  | 11  | 182            | 11-12 | 11-12 |
| East London.....                      | 1400          | 7   | 8   | 9   | 12  | 16  | 16  | 17  | 14  | 10  | 7   | 7   | 9   | 132            | 12    | 12    |
| Eatoncourt.....                       | 1400          | 29  | 26  | 30  | 29  | 29  | 28  | 28  | 27  | 25  | 25  | 26  | 28  | 328            | 11    | 11    |
| Johannesburg/Jan Smuts.....           | 1400          | 25  | 23  | 26  | 22  | 21  | 19  | 21  | 18  | 16  | 15  | 20  | 22  | 247            | 12    | 12    |
| Kimberley.....                        | 1400          | 20  | 19  | 20  | 19  | 21  | 20  | 17  | 14  | 14  | 14  | 14  | 17  | 209            | 12    | 12    |
| Kuruman.....                          | 1400          | 29  | 27  | 28  | 28  | 26  | 25  | 26  | 23  | 25  | 24  | 26  | 28  | 313            | 9-11  | 9-11  |
| Lydenburg.....                        | 1400          | 28  | 26  | 28  | 27  | 31  | 27  | 29  | 26  | 25  | 23  | 25  | 28  | 322            | 5-6   | 5-6   |
| Macuville.....                        | 1400          | 24  | 20  | 22  | 23  | 29  | 25  | 26  | 21  | 20  | 20  | 20  | 23  | 271            | 2-3   | 2-3   |
| Mafeking.....                         | 1400          | 26  | 24  | 26  | 24  | 25  | 24  | 24  | 23  | 19  | 17  | 22  | 25  | 281            | 9-10  | 9-10  |
| Marnits.....                          | 1400          | 27  | 25  | 27  | 26  | 27  | 26  | 25  | 25  | 20  | 21  | 24  | 26  | 298            | 11-12 | 10-11 |
| Matroosberg.....                      | 1300          | 14  | 13  | 15  | 17  | 16  | 17  | 18  | 17  | 15  | 16  | 14  | 15  | 191            | 10-11 | 10-11 |
| Middelburg.....                       | 1400          | 19  | 18  | 18  | 20  | 17  | 16  | 14  | 14  | 14  | 15  | 17  | 15  | 200            | 11    | 10-11 |
| Okiep.....                            | 1800          | 28  | 25  | 27  | 25  | 24  | 21  | 21  | 22  | 24  | 26  | 26  | 26  | 295            | 12-13 | 11-13 |
| Phalaborwa.....                       | 1400          | 28  | 24  | 29  | 28  | 30  | 28  | 27  | 26  | 26  | 25  | 26  | 26  | 321            | 9-10  | 9-10  |
| Pietersburg.....                      | 1400          | 25  | 24  | 27  | 26  | 26  | 25  | 25  | 25  | 21  | 19  | 21  | 25  | 290            | 12    | 12    |
| Piet Retief.....                      | 1400          | 27  | 25  | 26  | 26  | 29  | 27  | 25  | 27  | 25  | 26  | 24  | 25  | 317            | 11-12 | 9-11  |
| Port Elizabeth.....                   | 1400          | 7   | 7   | 11  | 12  | 17  | 17  | 17  | 13  | 8   | 7   | 6   | 6   | 127            | 12    | 12    |
| Port Saint Johns.....                 | 1400          | 15  | 14  | 17  | 17  | 19  | 23  | 21  | 16  | 13  | 14  | 14  | 16  | 200            | 12    | 12    |
| Queenstown.....                       | 1400          | 27  | 24  | 25  | 25  | 25  | 22  | 22  | 21  | 21  | 23  | 24  | 27  | 285            | 9-11  | 8-11  |
| Sheeprun.....                         | 1400          | 29  | 27  | 30  | 29  | 30  | 28  | 29  | 28  | 27  | 28  | 28  | 30  | 341            | 5-6   | 5-6   |
| Uppington.....                        | 1300          | 22  | 21  | 21  | 18  | 19  | 17  | 15  | 15  | 17  | 18  | 19  | 22  | 223            | 12    | 12    |
| Waivis Bay.....                       | 1300          | 22  | 21  | 20  | 19  | 18  | 18  | 20  | 16  | 16  | 15  | 18  | 21  | 224            | 7-8   | 5-6   |
| Wepener.....                          | 1400          | 24  | 22  | 22  | 22  | 22  | 24  | 23  | 22  | 17  | 17  | 18  | 22  | 255            | 12-13 | 12-13 |
| Willowmore.....                       | 1400          | 22  | 20  | 23  | 21  | 22  | 19  | 22  | 19  | 20  | 19  | 20  | 20  | 246            | 5-6   | 7-8   |
| South-West Africa:                    |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |
| Gobabis.....                          | 1300          | 27  | 24  | 27  | 25  | 27  | 23  | 24  | 24  | 24  | 26  | 27  | 28  | 306            | 8     | 8     |
| Keetmanshoop.....                     | 1300          | 24  | 22  | 23  | 18  | 17  | 13  | 12  | 13  | 17  | 17  | 20  | 23  | 219            | 9-10  | 9-10  |
| Mariental.....                        | 1300          | 30  | 27  | 29  | 27  | 29  | 26  | 27  | 26  | 26  | 27  | 27  | 30  | 331            | 8     | 7-8   |
| Outjo.....                            | 1300          | 30  | 27  | 30  | 28  | 29  | 27  | 28  | 26  | 25  | 29  | 29  | 30  | 345            | 8     | 8     |
| Windhoek.....                         | 1300          | 28  | 26  | 28  | 25  | 27  | 24  | 25  | 25  | 24  | 24  | 25  | 29  | 311            | 9-10  | 9-10  |
| Botswana:                             |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |
| Francistown.....                      | 2000          | 27  | 24  | 28  | 27  | 30  | 29  | 30  | 28  | 25  | 24  | 25  | 25  | 320            | 6     | 6     |
| Gaborone.....                         | 2000          | 29  | 27  | 29  | 29  | 31  | 30  | 31  | 30  | 28  | 28  | 28  | 29  | 349            | 6-7   | 6-7   |
| Ghanai.....                           | 1900          | 28  | 26  | 29  | 29  | 31  | 30  | 31  | 30  | 29  | 28  | 28  | 25  | 339            | 5-6   | 5-6   |
| Maun.....                             | 2000          | 30  | 27  | 30  | 30  | 31  | 30  | 31  | 30  | 28  | 29  | 28  | 29  | 353            | 9     | 8-9   |
| Shakawe.....                          | 1900          | 30  | 27  | 31  | 30  | 31  | 30  | 31  | 31  | 30  | 30  | 28  | 30  | 355            | 8     | 8     |
| Tsabong.....                          | 1900          | 27  | 27  | 28  | 29  | 30  | 30  | 31  | 30  | 29  | 28  | 26  | 26  | 340            | 6-7   | 6-7   |
| Tsane.....                            | 1900          | 28  | 27  | 30  | 29  | 31  | 30  | 30  | 30  | 29  | 29  | 27  | 28  | 346            | 6     | 6     |
| Republic of South Africa:             |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |
| Alexander Bay.....                    | 1900          | 12  | 12  | 16  | 19  | 22  | 24  | 24  | 21  | 18  | 18  | 15  | 13  | 213            | 10-11 | 10-11 |
| Beaufort West.....                    | 2000          | 12  | 14  | 19  | 24  | 24  | 22  | 24  | 23  | 21  | 18  | 15  | 13  | 228            | 11-12 | 10-12 |
| Bethlehem.....                        | 2000          | 25  | 24  | 28  | 27  | 30  | 28  | 30  | 28  | 26  | 23  | 24  | 24  | 318            | 10-11 | 10-11 |
| Calvinia.....                         | 1900          | 27  | 26  | 29  | 28  | 29  | 27  | 29  | 28  | 28  | 29  | 28  | 28  | 335            | 11-12 | 10-12 |
| Cape Agulhas.....                     | 1900          | 11  | 11  | 16  | 15  | 15  | 15  | 16  | 14  | 13  | 13  | 12  | 12  | 174            | 12    | 11-12 |
| Cape Columbine.....                   | 1900          | 7   | 7   | 9   | 12  | 16  | 16  | 18  | 15  | 12  | 10  | 8   | 6   | 135            | 12    | 11-12 |
| Cape Saint Lucia.....                 | 2000          | 12  | 14  | 14  | 13  | 17  | 17  | 13  | 12  | 11  | 10  | 11  | 15  | 158            | 11    | 10-11 |
| Cape Town/D.F. Malan.....             | 1900          | 14  | 15  | 18  | 23  | 23  | 23  | 23  | 22  | 21  | 21  | 15  | 13  | 230            | 11-12 | 11-12 |
| De Aar.....                           | 2000          | 25  | 24  | 27  | 27  | 28  | 27  | 29  | 28  | 27  | 26  | 24  | 24  | 316            | 10-11 | 10-11 |
| Durban/Louis Botha.....               | 2000          | 21  | 21  | 22  | 25  | 28  | 27  | 26  | 22  | 20  | 19  | 21  | 19  | 270            | 11-12 | 11-12 |
| East London.....                      | 2000          | 16  | 16  | 17  | 16  | 20  | 19  | 20  | 20  | 17  | 14  | 16  | 17  | 207            | 11-12 | 10-12 |
| Eatoncourt.....                       | 2000          | 26  | 24  | 28  | 27  | 30  | 29  | 29  | 28  | 26  | 25  | 26  | 26  | 324            | 11    | 11    |
| Johannesburg/Jan Smuts.....           | 2000          | 27  | 25  | 29  | 27  | 30  | 27  | 28  | 25  | 25  | 24  | 24  | 26  | 319            | 12    | 12    |
| Kimberley.....                        | 2000          | 23  | 22  | 26  | 26  | 28  | 26  | 28  | 24  | 25  | 21  | 20  | 20  | 287            | 12    | 12    |
| Kuruman.....                          | 2000          | 30  | 27  | 30  | 29  | 30  | 29  | 31  | 30  | 30  | 30  | 29  | 30  | 354            | 9-11  | 9-11  |
| Lydenburg.....                        | 2000          | 24  | 23  | 27  | 26  | 29  | 29  | 30  | 29  | 27  | 27  | 25  | 27  | 324            | 5-6   | 5-6   |
| Macuville.....                        | 2000          | 22  | 24  | 26  | 28  | 31  | 29  | 29  | 29  | 28  | 28  | 26  | 26  | 326            | 2-3   | 2-3   |
| Mafeking.....                         | 2000          | 28  | 26  | 29  | 28  | 30  | 29  | 30  | 30  | 28  | 27  | 28  | 27  | 330            | 9-10  | 9-10  |
| Marnits.....                          | 2000          | 27  | 25  | 27  | 26  | 27  | 27  | 27  | 27  | 23  | 22  | 24  | 26  | 309            | 11-12 | 10-12 |
| Matroosberg.....                      | 1900          | 13  | 16  | 21  | 25  | 27  | 25  | 27  | 26  | 25  | 23  | 19  | 15  | 202            | 10-11 | 10-11 |
| Middelburg.....                       | 2000          | 23  | 24  | 26  | 26  | 28  | 25  | 28  | 26  | 25  | 25  | 23  | 22  | 301            | 10-11 | 10-11 |
| Okiep.....                            | 1900          | 25  | 23  | 28  | 27  | 29  | 25  | 29  | 27  | 25  | 27  | 26  | 25  | 318            | 12-13 | 11-13 |
| Phalaborwa.....                       | 2000          | 26  | 24  | 27  | 26  | 29  | 28  | 29  | 28  | 25  | 25  | 24  | 25  | 315            | 9-10  | 9-10  |
| Pietersburg.....                      | 2000          | 27  | 25  | 29  | 29  | 31  | 29  | 30  | 29  | 25  | 22  | 24  | 23  | 321            | 12    | 11-12 |

FIGURE 52. DAYS WITH LOW CLOUD AMOUNT 0 TO 1/4, OR CEILING 1,000 FEET OR GREATER, VISIBILITY 2 1/2 MILES OR GREATER, AND SURFACE WIND SPEED 10 KNOTS OR LESS (Continued)

| COUNTRY AND STATION                   | HOUR<br>(LST) |     |     |     |     |     |     |     |     |     |     |     |     | DATA BASE INFO |       |       |  |
|---------------------------------------|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|-------|-------|--|
|                                       |               | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANN            | FOR   | CYR   |  |
| Republic of South Africa (Continued): |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |  |
| Piet Retief.....                      | 2000          | 23  | 22  | 24  | 24  | 29  | 27  | 29  | 27  | 25  | 22  | 22  | 24  | 298            | 11-12 | 10-11 |  |
| Port Elisabeth.....                   | 2000          | 18  | 18  | 20  | 20  | 23  | 23  | 23  | 21  | 18  | 17  | 17  | 20  | 237            | 12    | 11-12 |  |
| Port Saint Johns.....                 | 2000          | 18  | 18  | 20  | 23  | 27  | 27  | 20  | 24  | 19  | 18  | 19  | 21  | 259            | 12    | 10-12 |  |
| Queenstown.....                       | 2000          | 24  | 24  | 26  | 27  | 29  | 27  | 28  | 29  | 28  | 27  | 24  | 27  | 319            | 8-9   | 8-9   |  |
| Sheeprun.....                         | 2000          | 25  | 25  | 28  | 27  | 30  | 29  | 30  | 30  | 29  | 27  | 27  | 27  | 334            | 8-6   | 8-6   |  |
| Uppington.....                        | 1900          | 23  | 22  | 26  | 27  | 29  | 28  | 27  | 27  | 27  | 26  | 24  | 23  | 307            | 12    | 12    |  |
| Wepener.....                          | 2000          | 25  | 23  | 26  | 27  | 29  | 28  | 29  | 30  | 27  | 26  | 24  | 25  | 318            | 12-13 | 12-13 |  |
| Willowmore.....                       | 2000          | 21  | 19  | 24  | 27  | 29  | 27  | 28  | 28  | 25  | 21  | 21  | 20  | 289            | 8-9   | 7-9   |  |
| South-West Africa:                    |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |  |
| Gobabis.....                          | 1900          | 29  | 27  | 30  | 28  | 31  | 30  | 31  | 30  | 29  | 29  | 27  | 28  | 351            | 8     | 8     |  |
| Koetmanshoop.....                     | 1900          | 14  | 17  | 22  | 24  | 27  | 23  | 23  | 21  | 19  | 18  | 13  | 12  | 231            | 9-10  | 9-10  |  |
| Mariental.....                        | 1900          | 28  | 26  | 30  | 29  | 30  | 30  | 31  | 30  | 29  | 29  | 28  | 27  | 347            | 8     | 7-8   |  |
| Outjo.....                            | 1900          | 26  | 25  | 30  | 30  | 31  | 30  | 31  | 31  | 27  | 25  | 25  | 24  | 336            | 8     | 8     |  |
| Windhoek.....                         | 1900          | 25  | 26  | 30  | 29  | 31  | 29  | 30  | 30  | 29  | 28  | 25  | 25  | 336            | 8     | 8     |  |

FIGURE 53. MEAN NUMBER OF DAYS WITH SURFACE WIND SPEED >10 KNOTS AND NO PRECIPITATION, AT SPECIFIED HOURS

| COUNTRY AND STATION         | HOUR<br>(LST) |     |     |     |     |     |     |     |     |     |     |     |     |     |       | DATA BASE INFO |  |
|-----------------------------|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|----------------|--|
|                             |               | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANN | FOR   | CYR            |  |
| Botswana:                   |               |     |     |     |     |     |     |     |     |     |     |     |     |     |       |                |  |
| Francistown.....            | 0800          | 2   | 1   | 2   | 1   | *   | 0   | 1   | 2   | 4   | 3   | 1   | 2   | 20  | 6     | 6              |  |
| Gaberones.....              | 0800          | *   | *   | 0   | 0   | *   | 0   | 0   | 1   | 1   | 2   | *   | *   | 5   | 7     | 7              |  |
| Ghanai.....                 | 0700          | 2   | 1   | 1   | 1   | *   | *   | *   | 1   | 3   | 5   | 3   | 2   | 19  | 6     | 6              |  |
| Maun.....                   | 0800          | *   | 0   | 0   | 0   | 0   | 0   | 0   | *   | *   | 1   | *   | 0   | 1   | 9     | 9              |  |
| Rhukawe.....                | 0700          | 0   | 0   | *   | *   | *   | 0   | 0   | 0   | 0   | *   | 1   | *   | 2   | 5     | 5              |  |
| Tsabung.....                | 0700          | 1   | 1   | 0   | *   | *   | *   | 0   | *   | 2   | 2   | 2   | 1   | 10  | 6-7   | 6-7            |  |
| Tsane.....                  | 0700          | 1   | 1   | 1   | *   | 0   | 0   | *   | 1   | 2   | 1   | 1   | 2   | 9   | 6     | 6              |  |
| Republic of South Africa:   |               |     |     |     |     |     |     |     |     |     |     |     |     |     |       |                |  |
| Alexander Bay.....          | 0700          | 1   | *   | *   | *   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 10  | 12    | 12             |  |
| Beaufort West.....          | 0800          | 2   | 1   | 1   | 2   | 4   | 5   | 4   | 4   | 4   | 3   | 1   | 2   | 31  | 11-12 | 11-12          |  |
| Bethlehem.....              | 0800          | 1   | *   | *   | *   | 0   | 0   | 0   | *   | 1   | 2   | 1   | 1   | 6   | 10-11 | 10-11          |  |
| Calvinia.....               | 0700          | *   | 0   | *   | *   | *   | 1   | 1   | 1   | 1   | *   | 1   | *   | 5   | 12    | 12             |  |
| Cape Agulhas.....           | 0700          | 8   | 6   | 7   | 6   | 5   | 5   | 6   | 4   | 9   | 9   | 8   | 8   | 81  | 12    | 12             |  |
| Cape Columbine.....         | 0700          | 6   | 4   | 4   | 3   | 4   | 4   | 3   | 5   | 5   | 4   | 7   | 8   | 57  | 12    | 12             |  |
| Cape Saint Lucia.....       | 0800          | 4   | 5   | 6   | 6   | 8   | 7   | 9   | 9   | 8   | 7   | 5   | 4   | 78  | 11    | 11             |  |
| Cape Town/D.F. Malan.....   | 0700          | 3   | 2   | 2   | 1   | 2   | 1   | 2   | 2   | 2   | 3   | 4   | 4   | 28  | 11-12 | 11-12          |  |
| De Aar.....                 | 0800          | 1   | 1   | *   | *   | *   | *   | *   | *   | 1   | 1   | 1   | 2   | 8   | 10-11 | 10-11          |  |
| Durban/Louis Botha.....     | 0800          | 1   | 1   | 1   | 1   | *   | *   | 1   | 2   | 2   | 3   | 3   | 2   | 17  | 11-12 | 11-12          |  |
| East London.....            | 0800          | 4   | 3   | 2   | 2   | 2   | 3   | 3   | 4   | 4   | 6   | 5   | 5   | 42  | 12    | 12             |  |
| Estcourt.....               | 0800          | 0   | *   | *   | *   | *   | *   | 0   | *   | *   | *   | *   | *   | 2   | 11    | 11             |  |
| Johannesburg/Jan Smuts..... | 0800          | 1   | 1   | *   | *   | *   | 1   | 1   | 1   | 3   | 3   | 2   | 2   | 14  | 12    | 12             |  |
| Kimberley.....              | 0800          | 3   | 2   | 1   | 1   | 1   | 1   | 1   | 3   | 4   | 4   | 5   | 5   | 30  | 12    | 12             |  |
| Kuruman.....                | 0800          | *   | *   | *   | *   | 0   | 1   | 1   | 1   | *   | 1   | 1   | 1   | 5   | 9-11  | 9-11           |  |
| Lydenburg.....              | 0800          | *   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | *   | *   | 0   | 1   | 5-6   | 5-6            |  |
| Macuville.....              | 0800          | 1   | 0   | 1   | 1   | 0   | 0   | 0   | 0   | 1   | 3   | 3   | 0   | 9   | 2-3   | 2-3            |  |
| Mafeking.....               | 0800          | 1   | 1   | 1   | 1   | *   | 0   | 1   | 1   | 4   | 5   | 4   | 2   | 19  | 9-10  | 9-10           |  |
| Marnits.....                | 0800          | 1   | 1   | *   | 1   | 1   | *   | *   | 1   | 3   | 5   | 4   | 2   | 19  | 11-12 | 10-12          |  |
| Matroosberg.....            | 0700          | 1   | 1   | 1   | *   | *   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 8   | 10-11 | 10-11          |  |
| Middelburg.....             | 0800          | 1   | *   | *   | *   | 1   | 1   | 1   | 2   | 1   | 1   | 1   | 1   | 9   | 11    | 10-11          |  |
| Okiep.....                  | 0700          | 1   | 1   | 1   | 1   | *   | 1   | 1   | 1   | 2   | 1   | 1   | 1   | 10  | 12-13 | 11-13          |  |
| Phalaborwa.....             | 0800          | *   | 0   | 0   | *   | *   | *   | *   | *   | 1   | 1   | *   | 1   | 4   | 10    | 10             |  |
| Pietersburg.....            | 0800          | *   | *   | *   | 0   | *   | *   | *   | *   | 1   | 2   | 1   | *   | 5   | 12    | 12             |  |
| Piet Retief.....            | 0800          | 0   | 0   | 0   | 0   | *   | 0   | 0   | 0   | 0   | 0   | 0   | *   | *   | 11-12 | 11-12          |  |
| Port Elisabeth.....         | 0800          | 3   | 3   | 2   | 2   | 1   | 1   | 1   | 2   | 3   | 5   | 5   | 4   | 32  | 12    | 12             |  |
| Port Saint Johns.....       | 0800          | 2   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 4   | 3   | 3   | 19  | 12    | 12             |  |
| Queenstown.....             | 0800          | *   | 0   | *   | *   | 1   | 1   | 1   | 1   | *   | *   | *   | *   | 6   | 9-11  | 9-11           |  |
| Sheeprun.....               | 0800          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | *   | *   | 0   | 0   | 0   | 1   | 5-6   | 5-6            |  |
| Uppington.....              | 0700          | 2   | 1   | 1   | 1   | 1   | 2   | 3   | 4   | 3   | 3   | 4   | 3   | 29  | 12    | 11-12          |  |

Footnote at end of table.



FIGURE 53. DAYS WITH SURFACE WIND SPEED &gt;16 KNOTS AND NO PRECIPITATION (Continued)

|                                       |               |     |     |     |     |     |     |     |     |     |     |     |     | DATA BASE INFO |       |       |
|---------------------------------------|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|-------|-------|
| COUNTRY AND STATION                   | HOUR<br>(LST) |     |     |     |     |     |     |     |     |     |     |     |     | FOR            | CYR   |       |
|                                       |               | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |                |       | ANN   |
| Republic of South Africa (Continued): |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |
| Wepener.....                          | 0800          | 2   | 1   | 2   | 1   | 1   | 1   | 1   | 1   | 3   | 3   | 2   | 1   | 20             | 12-13 | 12-13 |
| Willowmore.....                       | 0800          | 0   | 0   | *   | *   | *   | *   | *   | *   | *   | 1   | 1   | 1   | 4              | 8-9   | 8-9   |
| South-West Africa:                    |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |
| Gobabis.....                          | 0700          | 0   | 0   | 0   | 0   | 0   | 0   | *   | *   | *   | *   | *   | *   | 1              | 8     | 8     |
| Keetmanshoop.....                     | 0700          | 1   | 1   | 1   | 1   | 2   | 3   | 4   | 3   | 1   | 3   | 2   | 2   | 24             | 9-10  | 9-10  |
| Mariental.....                        | 0700          | *   | *   | *   | 0   | *   | 0   | 0   | 0   | *   | *   | *   | 1   | 1              | 8     | 8     |
| Outjo.....                            | 0700          | 0   | 0   | 0   | 0   | 0   | 0   | *   | 0   | *   | 1   | *   | 0   | 1              | 8     | 8     |
| Windhoek.....                         | 0700          | *   | 0   | *   | *   | *   | *   | *   | 1   | *   | 1   | 1   | *   | 4              | 9-10  | 9-10  |
| Botswana:                             |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |
| Francistown.....                      | 1400          | 2   | 2   | 1   | 2   | 1   | 2   | 3   | 3   | 4   | 2   | 2   | 1   | 23             | 6     | 6     |
| Gaborones.....                        | 1400          | *   | *   | *   | *   | *   | *   | *   | 1   | 2   | 2   | *   | 1   | 5              | 6-7   | 6-7   |
| Ghanzi.....                           | 1300          | 2   | 2   | 2   | 2   | 3   | 2   | 3   | 4   | 4   | 6   | 2   | 2   | 31             | 6     | 6     |
| Maun.....                             | 1400          | *   | 0   | 0   | 0   | *   | *   | 0   | *   | *   | *   | 0   | *   | 1              | 9     | 9     |
| Shakawe.....                          | 1300          | *   | *   | *   | *   | 0   | 0   | *   | *   | *   | *   | 1   | *   | 3              | 5     | 5     |
| Teabong.....                          | 1300          | 2   | *   | 1   | 2   | 2   | 1   | 1   | 4   | 3   | 2   | 1   | 1   | 20             | 6-7   | 6-7   |
| Tsano.....                            | 1300          | 1   | *   | 1   | 1   | 1   | 1   | 2   | 2   | 2   | 2   | 1   | 1   | 13             | 6     | 6     |
| Republic of South Africa:             |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |
| Alexander Bay.....                    | 1300          | 19  | 15  | 13  | 8   | 6   | 5   | 4   | 8   | 12  | 17  | 18  | 19  | 144            | 12    | 12    |
| Beaufort West.....                    | 1400          | 5   | 5   | 4   | 5   | 6   | 8   | 8   | 9   | 8   | 6   | 6   | 5   | 75             | 11-12 | 11-12 |
| Bethlehem.....                        | 1400          | 1   | 1   | *   | 1   | 1   | 2   | 2   | 2   | 3   | 3   | 2   | 1   | 19             | 10-11 | 10-11 |
| Calvinia.....                         | 1300          | 1   | 1   | *   | 1   | 1   | 1   | 2   | 2   | 2   | 1   | 1   | 1   | 13             | 12    | 11-12 |
| Cape Agulhas.....                     | 1300          | 12  | 12  | 11  | 11  | 9   | 8   | 12  | 11  | 14  | 15  | 13  | 13  | 141            | 12    | 12    |
| Cape Columbine.....                   | 1300          | 15  | 10  | 10  | 6   | 5   | 6   | 6   | 8   | 10  | 12  | 14  | 16  | 117            | 12    | 12    |
| Cape Saint Lucia.....                 | 1400          | 9   | 7   | 8   | 7   | 6   | 5   | 7   | 11  | 12  | 11  | 10  | 9   | 102            | 11    | 10-11 |
| Cape Town/D.F. Malan.....             | 1300          | 12  | 9   | 8   | 6   | 5   | 5   | 5   | 6   | 8   | 9   | 12  | 13  | 98             | 11-12 | 11-12 |
| De Aar.....                           | 1400          | 3   | 2   | 1   | 1   | 1   | 2   | 3   | 5   | 4   | 3   | 2   | 2   | 28             | 10-11 | 10-11 |
| Durban/Louis Botha.....               | 1400          | 9   | 7   | 9   | 7   | 4   | 4   | 5   | 10  | 11  | 10  | 8   | 9   | 95             | 11-12 | 11-12 |
| East London.....                      | 1400          | 11  | 11  | 8   | 5   | 6   | 6   | 6   | 9   | 10  | 13  | 11  | 11  | 109            | 12    | 12    |
| Eateourt.....                         | 1400          | *   | *   | *   | *   | 1   | 1   | 1   | 2   | 2   | 3   | *   | 1   | 11             | 11    | 11    |
| Johannesburg/Jan Smuts.....           | 1400          | *   | *   | *   | 1   | 1   | 3   | 2   | 5   | 4   | 5   | 2   | 1   | 26             | 12    | 12    |
| Kimberley.....                        | 1400          | 2   | 1   | 3   | 2   | 3   | 3   | 4   | 6   | 6   | 6   | 5   | 4   | 44             | 12    | 12    |
| Kuruman.....                          | 1400          | 1   | *   | 1   | *   | 1   | 3   | 3   | 4   | 2   | 3   | 2   | *   | 20             | 9-11  | 9-11  |
| Lydenburg.....                        | 1400          | 0   | 0   | 0   | *   | 0   | *   | *   | *   | *   | *   | *   | *   | 2              | 5-6   | 5-6   |
| Macouville.....                       | 1400          | 1   | 1   | 1   | 1   | 0   | 1   | 1   | 1   | 1   | 1   | 2   | *   | 9              | 2-3   | 2-3   |
| Mafeking.....                         | 1400          | 1   | *   | *   | 1   | 1   | 1   | 2   | 2   | 4   | 3   | 1   | 1   | 17             | 9-10  | 9-10  |
| Marnitz.....                          | 1400          | *   | 1   | *   | *   | *   | 1   | 1   | 2   | 2   | 2   | 1   | 1   | 12             | 11-12 | 10-12 |
| Matroosberg.....                      | 1300          | 6   | 5   | 3   | 4   | 3   | 4   | 5   | 4   | 4   | 5   | 6   | 4   | 51             | 10-11 | 10-11 |
| Middelburg.....                       | 1400          | 4   | 3   | 3   | 3   | 3   | 4   | 5   | 7   | 7   | 6   | 4   | 4   | 51             | 11    | 10-11 |
| Okiep.....                            | 1300          | *   | *   | 1   | 1   | 1   | 2   | 2   | 2   | 1   | *   | 1   | *   | 11             | 12-13 | 11-13 |
| Phalaborwa.....                       | 1400          | *   | *   | *   | *   | *   | *   | 1   | 1   | 1   | 1   | 1   | 1   | 5              | 9-10  | 9-10  |
| Pietersburg.....                      | 1400          | *   | *   | *   | *   | *   | *   | *   | 1   | 2   | 3   | 2   | *   | 10             | 12    | 12    |
| Piet Retief.....                      | 1400          | 0   | 0   | *   | 0   | *   | *   | *   | *   | *   | *   | *   | *   | 2              | 11-12 | 11-12 |
| Port Elisabeth.....                   | 1400          | 13  | 11  | 10  | 8   | 5   | 5   | 5   | 8   | 13  | 14  | 15  | 14  | 122            | 12    | 12    |
| Port Saint Johns.....                 | 1400          | 8   | 8   | 8   | 7   | 4   | 3   | 4   | 9   | 10  | 10  | 9   | 8   | 89             | 12    | 12    |
| Queenstown.....                       | 1400          | *   | *   | 1   | *   | 1   | 2   | 2   | 3   | 2   | 3   | 1   | *   | 16             | 9-11  | 9-11  |
| Sheeprun.....                         | 1400          | 0   | 0   | 0   | 0   | *   | *   | *   | 1   | 1   | 0   | *   | *   | 4              | 5-6   | 5-6   |
| Uppington.....                        | 1300          | 2   | 1   | 3   | 5   | 4   | 6   | 9   | 9   | 6   | 4   | 3   | 2   | 54             | 12    | 11-12 |
| Walvis Bay.....                       | 1300          | 1   | 1   | 1   | 2   | 1   | 2   | 3   | 4   | 4   | 5   | 4   | 2   | 29             | 7-8   | 5-6   |
| Wepener.....                          | 1400          | 1   | *   | 1   | 1   | 1   | 1   | 1   | 2   | 3   | 3   | 2   | 1   | 17             | 12-13 | 12-13 |
| Willowmore.....                       | 1400          | 1   | 1   | 1   | 1   | 1   | 2   | 2   | 3   | 2   | 2   | 2   | 2   | 20             | 8-9   | 7-9   |
| South-West Africa:                    |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |
| Gobabis.....                          | 1300          | *   | 0   | 0   | *   | *   | 1   | 1   | 1   | 1   | 1   | *   | *   | 4              | 8     | 8     |
| Keetmanshoop.....                     | 1300          | 1   | 1   | 2   | 3   | 3   | 7   | 8   | 7   | 5   | 5   | 2   | 2   | 45             | 9-10  | 9-10  |
| Mariental.....                        | 1300          | 0   | *   | *   | *   | *   | 1   | 1   | 2   | 1   | 1   | 1   | 0   | 6              | 8     | 8     |
| Outjo.....                            | 1300          | 0   | *   | 0   | *   | 0   | 1   | *   | *   | *   | *   | *   | 0   | 2              | 8     | 8     |
| Windhoek.....                         | 1300          | 1   | *   | *   | 1   | 1   | 2   | 2   | 2   | 1   | 2   | 1   | *   | 13             | 9-10  | 9-10  |
| Botswana:                             |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |
| Francistown.....                      | 2000          | *   | 1   | 1   | 1   | 0   | *   | *   | *   | 1   | 3   | 1   | 1   | 10             | 6     | 6     |
| Gaborones.....                        | 2000          | *   | *   | *   | *   | 0   | *   | 0   | 0   | 1   | 1   | 1   | *   | 4              | 6-7   | 6-7   |
| Ghanzi.....                           | 1900          | 1   | 1   | *   | *   | 0   | 0   | 0   | *   | 0   | 2   | 2   | 3   | 10             | 5-6   | 5-6   |
| Maun.....                             | 2000          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | *              | 9     | 8-9   |
| Shakawe.....                          | 1900          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 1   | *   | 1              | 5     | 5     |

Footnote at end of table.

FIGURE 53. DAYS WITH SURFACE WIND SPEED &gt;16 KNOTS AND NO PRECIPITATION (Continued)

| COUNTRY AND STATION         | HOUR<br>(LST) |     |     |     |     |     |     |     |     |     |     |     |     |     |       | DATA BASE INFO |  |
|-----------------------------|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|----------------|--|
|                             |               | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANN | FOR   | CYR            |  |
| Botswana (Continued):       |               |     |     |     |     |     |     |     |     |     |     |     |     |     |       |                |  |
| Tsabong.....                | 1900          | 1   | 1   | 1   | *   | *   | *   | *   | *   | *   | 0   | 1   | 1   | 6   | 6-7   | 6-7            |  |
| Tsane.....                  | 1900          | 1   | *   | *   | 0   | 0   | 0   | *   | *   | *   | 1   | *   | 1   | 3   | 6     | 6              |  |
| Republic of South Africa:   |               |     |     |     |     |     |     |     |     |     |     |     |     |     |       |                |  |
| Alexander Bay.....          | 1900          | 9   | 7   | 8   | 5   | 2   | 2   | 2   | 5   | 7   | 8   | 9   | 9   | 73  | 10-11 | 10-11          |  |
| Beaufort West.....          | 2000          | 10  | 7   | 4   | 2   | 2   | 4   | 3   | 3   | 3   | 5   | 9   | 10  | 63  | 11-12 | 10-12          |  |
| Bethlehem.....              | 2000          | 2   | 1   | *   | *   | 0   | 0   | *   | *   | 1   | 3   | 1   | 1   | 9   | 10-11 | 10-11          |  |
| Calvinia.....               | 1900          | *   | *   | *   | *   | *   | 1   | *   | 1   | 1   | *   | *   | *   | 4   | 11-12 | 10-12          |  |
| Cape Agulhas.....           | 1900          | 11  | 8   | 8   | 8   | 5   | 5   | 5   | 7   | 8   | 9   | 7   | 9   | 89  | 12    | 11-12          |  |
| Cape Columbine.....         | 1900          | 16  | 11  | 12  | 6   | 4   | 4   | 5   | 7   | 9   | 12  | 15  | 18  | 117 | 12    | 12             |  |
| Cape Saint Lucia.....       | 2000          | 7   | 5   | 6   | 6   | 6   | 5   | 8   | 10  | 9   | 10  | 7   | 7   | 89  | 11    | 10-11          |  |
| Cape Town/D.F. Malan.....   | 1900          | 7   | 5   | 8   | 2   | 1   | 1   | 1   | 2   | 3   | 4   | 6   | 8   | 43  | 11-12 | 11-12          |  |
| De Aar.....                 | 2000          | 2   | 1   | 1   | *   | 0   | *   | *   | *   | 1   | 1   | 1   | 2   | 10  | 10-11 | 10-11          |  |
| Durban/Louis Botha.....     | 2000          | 2   | 1   | 2   | 1   | 1   | 1   | 1   | 3   | 3   | 3   | 2   | 2   | 23  | 11-12 | 11-12          |  |
| East London.....            | 2000          | 5   | 4   | 3   | 2   | 1   | 1   | 2   | 2   | 4   | 6   | 4   | 4   | 38  | 11-12 | 10-12          |  |
| Estcourt.....               | 2000          | 1   | 1   | *   | *   | *   | *   | *   | 1   | 1   | 1   | 1   | *   | 7   | 11    | 11             |  |
| Johannesburg/Jan Smuts..... | 2000          | 1   | *   | *   | *   | 0   | 1   | *   | 1   | 1   | 2   | 1   | 1   | 8   | 12    | 12             |  |
| Kimberley.....              | 2000          | 1   | 1   | 1   | 1   | *   | *   | *   | 1   | 1   | 3   | 3   | 3   | 15  | 12    | 12             |  |
| Kuruman.....                | 2000          | *   | 0   | 1   | *   | *   | 1   | *   | *   | *   | 1   | *   | *   | 5   | 9-11  | 9-11           |  |
| Lydenburg.....              | 2000          | *   | 0   | *   | *   | *   | *   | 0   | *   | 1   | *   | 0   | *   | 3   | 5-6   | 5-6            |  |
| Macuville.....              | 2000          | 1   | 0   | 1   | 1   | 0   | 0   | 0   | 1   | 1   | 1   | 1   | 1   | 0   | 2-3   | 2-3            |  |
| Mafeking.....               | 2000          | *   | *   | 1   | *   | *   | *   | *   | *   | *   | 1   | 1   | 1   | 6   | 9-10  | 9-10           |  |
| Marnitz.....                | 2000          | 1   | *   | *   | 1   | 0   | *   | *   | 1   | 1   | 2   | 1   | 1   | 8   | 11-12 | 10-12          |  |
| Matroosberg.....            | 1900          | 3   | 3   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 2   | 4   | 19  | 10-11 | 10-11          |  |
| Middelburg.....             | 2000          | 1   | *   | 1   | *   | *   | 1   | 1   | 1   | 1   | 1   | *   | *   | 7   | 10-11 | 10-11          |  |
| Okiep.....                  | 1900          | 1   | 1   | *   | *   | *   | 1   | *   | 1   | 1   | *   | *   | 1   | 6   | 12-13 | 11-13          |  |
| Phalaborwa.....             | 2000          | 1   | *   | *   | *   | 0   | *   | *   | 1   | 1   | 2   | 1   | 1   | 8   | 9-10  | 9-10           |  |
| Pietersburg.....            | 2000          | 1   | *   | *   | *   | *   | 0   | *   | *   | 1   | 1   | 1   | 1   | 0   | 12    | 12             |  |
| Piet Retief.....            | 2000          | *   | 0   | *   | 0   | 0   | *   | 0   | 0   | 0   | *   | *   | *   | 1   | 11-12 | 11-12          |  |
| Port Elizabeth.....         | 2000          | 5   | 4   | 3   | 3   | 2   | 2   | 2   | 5   | 4   | 5   | 4   | 3   | 41  | 12    | 11-12          |  |
| Port Saint Johns.....       | 2000          | 6   | 5   | 5   | 3   | 1   | 1   | 1   | 3   | 4   | 6   | 5   | 5   | 45  | 12    | 11-12          |  |
| Queenstown.....             | 2000          | *   | *   | *   | *   | 0   | *   | *   | 1   | *   | *   | *   | *   | 3   | 5-9   | 5-9            |  |
| Sheeprun.....               | 2000          | 0   | *   | *   | 0   | 0   | *   | *   | *   | 0   | *   | *   | *   | 2   | 5-6   | 5-6            |  |
| Uppington.....              | 1900          | 2   | 1   | 1   | 1   | *   | *   | *   | 1   | 1   | 2   | 2   | 3   | 14  | 12    | 11-12          |  |
| Wepener.....                | 2000          | 2   | 1   | 1   | *   | *   | *   | *   | 0   | 1   | 1   | 2   | 2   | 10  | 12-13 | 12-13          |  |
| Willowmore.....             | 2000          | 1   | 1   | 1   | 1   | *   | 1   | *   | 1   | 1   | 1   | 1   | 1   | 10  | 8-9   | 7-9            |  |
| South-West Africa:          |               |     |     |     |     |     |     |     |     |     |     |     |     |     |       |                |  |
| Gobabis.....                | 1900          | *   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | *   | 1   | 8     | 8              |  |
| Keetmanshoop.....           | 1900          | 9   | 5   | 3   | 1   | 1   | 1   | *   | 3   | 3   | 8   | 11  | 9   | 54  | 9-10  | 9-10           |  |
| Mariental.....              | 1900          | 1   | 1   | 0   | *   | 0   | 0   | 0   | 0   | *   | *   | 1   | 1   | 4   | 8     | 8              |  |
| Outjo.....                  | 1900          | 1   | *   | *   | 0   | 0   | 0   | 0   | *   | *   | 2   | 1   | 2   | 6   | 8     | 8              |  |
| Windhoek.....               | 1900          | 1   | *   | 0   | 0   | 0   | *   | *   | 1   | *   | 1   | 1   | 1   | 5   | 8     | 8              |  |

\* &lt; 0.5 day.

FIGURE 54. MEAN NUMBER OF DAYS WITH SURFACE WIND SPEED 4 TO 10 KNOTS, TEMPERATURE &gt;32°F. BUT &lt;90°F., AND NO PRECIPITATION, AT SPECIFIED HOURS

| COUNTRY AND STATION       | HOUR<br>(LST) |     |     |     |     |     |     |     |     |     |     |     |     | DATA BASE INFO |       |       |
|---------------------------|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|-------|-------|
|                           |               | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANN            | FOR   | CYR   |
| Botswana:                 |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |
| Francistown.....          | 0800          | 14  | 12  | 14  | 14  | 13  | 10  | 10  | 8   | 11  | 13  | 14  | 14  | 144            | 6     | 6     |
| Gaborone.....             | 0800          | 16  | 15  | 16  | 12  | 8   | 7   | 7   | 11  | 11  | 18  | 15  | 18  | 155            | 7     | 7     |
| Ghanai.....               | 0700          | 14  | 13  | 16  | 15  | 13  | 10  | 9   | 14  | 14  | 12  | 13  | 17  | 160            | 6     | 6     |
| Maun.....                 | 0800          | 11  | 10  | 11  | 10  | 10  | 7   | 11  | 15  | 14  | 14  | 10  | 12  | 133            | 9     | 9     |
| Shakawe.....              | 0700          | 10  | 8   | 10  | 9   | 7   | 6   | 6   | 7   | 8   | 15  | 12  | 13  | 111            | 5     | 5     |
| Tsabong.....              | 0700          | 15  | 12  | 13  | 7   | 4   | 3   | 6   | 9   | 9   | 11  | 15  | 13  | 116            | 6-7   | 6-7   |
| Tsane.....                | 0700          | 15  | 16  | 13  | 12  | 10  | 5   | 7   | 11  | 14  | 16  | 18  | 17  | 152            | 6     | 6     |
| Republic of South Africa: |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |
| Alexander Bay.....        | 0700          | 10  | 8   | 7   | 7   | 7   | 9   | 9   | 8   | 8   | 9   | 7   | 9   | 98             | 12    | 12    |
| Beaufort West.....        | 0800          | 12  | 10  | 11  | 10  | 10  | 9   | 10  | 11  | 10  | 11  | 11  | 13  | 129            | 11-12 | 11-12 |
| Bethlehem.....            | 0800          | 10  | 8   | 6   | 5   | 3   | 2   | 2   | 3   | 5   | 8   | 9   | 9   | 70             | 10-11 | 10-11 |
| Calvinia.....             | 0700          | 12  | 10  | 10  | 9   | 9   | 9   | 10  | 10  | 11  | 13  | 13  | 13  | 131            | 12    | 12    |
| Cape Agulhas.....         | 0700          | 11  | 12  | 11  | 12  | 14  | 13  | 13  | 14  | 10  | 10  | 11  | 11  | 140            | 12    | 12    |

FIGURE 54. DAYS WITH SURFACE WIND SPEED 4 TO 10 KNOTS, TEMPERATURE  $>32^{\circ}\text{F.}$  BUT  $<90^{\circ}\text{F.}$ , AND NO PRECIPITATION (Continued)

| COUNTRY AND STATION                   | HOUR<br>(LST) |     |     |     |     |     |     |     |     |     |     |     |     | DATA BASE INFO |       |       |  |
|---------------------------------------|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|-------|-------|--|
|                                       |               | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANN            | FOR   | CYR   |  |
| Republic of South Africa (Continued): |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |  |
| Cape Columbine.....                   | 0700          | 13  | 11  | 14  | 13  | 14  | 13  | 15  | 11  | 12  | 12  | 11  | 9   | 145            | 12    | 12    |  |
| Cape Saint Lucia.....                 | 0800          | 11  | 9   | 10  | 10  | 9   | 10  | 9   | 9   | 8   | 9   | 9   | 9   | 112            | 11    | 11    |  |
| Cape Town/D.F. Malan.....             | 0700          | 10  | 8   | 9   | 8   | 7   | 8   | 9   | 7   | 8   | 9   | 10  | 10  | 103            | 11-12 | 11-12 |  |
| De Aar.....                           | 0800          | 18  | 16  | 18  | 16  | 16  | 14  | 14  | 15  | 17  | 17  | 19  | 20  | 201            | 10-11 | 10-11 |  |
| Durban/Louis Botha.....               | 0800          | 10  | 9   | 12  | 8   | 4   | 4   | 5   | 6   | 8   | 11  | 9   | 10  | 94             | 11-12 | 11-12 |  |
| East London.....                      | 0800          | 11  | 10  | 14  | 13  | 14  | 15  | 15  | 14  | 13  | 9   | 10  | 10  | 147            | 12    | 12    |  |
| Estcourt.....                         | 0800          | 4   | 2   | 3   | 3   | 4   | 3   | 0   | 3   | 3   | 3   | 4   | 4   | 40             | 11    | 11    |  |
| Johannesburg/Jan Smuts.....           | 0800          | 15  | 13  | 17  | 12  | 13  | 12  | 13  | 14  | 12  | 12  | 14  | 13  | 160            | 12    | 12    |  |
| Kimberley.....                        | 0800          | 10  | 12  | 14  | 12  | 13  | 12  | 11  | 12  | 11  | 11  | 11  | 12  | 140            | 12    | 12    |  |
| Kuruman.....                          | 0800          | 15  | 13  | 14  | 10  | 11  | 8   | 9   | 12  | 14  | 19  | 19  | 17  | 160            | 9-11  | 9-11  |  |
| Lydenburg.....                        | 0800          | 13  | 10  | 9   | 4   | 4   | 4   | 5   | 5   | 7   | 8   | 11  | 10  | 88             | 5-6   | 5-6   |  |
| Macuville.....                        | 0800          | 15  | 7   | 13  | 11  | 5   | 5   | 4   | 5   | 11  | 12  | 14  | 17  | 115            | 2-3   | 2-3   |  |
| Mafeking.....                         | 0800          | 15  | 14  | 15  | 14  | 14  | 14  | 15  | 15  | 12  | 13  | 13  | 15  | 171            | 9-10  | 9-10  |  |
| Marnitz.....                          | 0800          | 21  | 15  | 21  | 18  | 15  | 15  | 17  | 19  | 16  | 12  | 15  | 17  | 205            | 11-12 | 10-12 |  |
| Matroosberg.....                      | 0700          | 15  | 16  | 16  | 12  | 11  | 11  | 12  | 12  | 15  | 15  | 19  | 18  | 175            | 10-11 | 10-11 |  |
| Middelburg.....                       | 0800          | 11  | 8   | 8   | 11  | 12  | 9   | 9   | 11  | 11  | 11  | 11  | 13  | 125            | 11    | 10-11 |  |
| Okiep.....                            | 0700          | 17  | 15  | 16  | 12  | 13  | 13  | 13  | 11  | 11  | 15  | 16  | 17  | 169            | 12-13 | 11-13 |  |
| Phalaborwa.....                       | 0800          | 15  | 13  | 13  | 10  | 6   | 5   | 6   | 10  | 14  | 15  | 15  | 15  | 142            | 10    | 10    |  |
| Pietersburg.....                      | 0800          | 14  | 12  | 12  | 8   | 8   | 8   | 7   | 7   | 8   | 11  | 13  | 12  | 121            | 12    | 12    |  |
| Plet Retief.....                      | 0800          | 5   | 5   | 4   | 4   | 6   | 5   | 7   | 9   | 9   | 7   | 8   | 6   | 76             | 11-12 | 11-12 |  |
| Port Elizabeth.....                   | 0800          | 12  | 10  | 10  | 9   | 9   | 10  | 10  | 10  | 10  | 10  | 10  | 10  | 115            | 12    | 12    |  |
| Port Saint Johns.....                 | 0800          | 11  | 11  | 14  | 16  | 19  | 17  | 17  | 16  | 14  | 12  | 13  | 12  | 171            | 12    | 12    |  |
| Queenstown.....                       | 0800          | 5   | 4   | 4   | 3   | 3   | 4   | 3   | 4   | 5   | 6   | 5   | 6   | 54             | 9-11  | 9-11  |  |
| Sheeprun.....                         | 0800          | 13  | 3   | 3   | 2   | 3   | 2   | 3   | 3   | 4   | 4   | 5   | 5   | 40             | 5-6   | 5-6   |  |
| Uppington.....                        | 0700          | 14  | 12  | 12  | 10  | 8   | 7   | 8   | 9   | 10  | 13  | 13  | 14  | 125            | 12    | 11-12 |  |
| Wepener.....                          | 0800          | 10  | 8   | 8   | 5   | 4   | 3   | 3   | 6   | 6   | 9   | 10  | 11  | 80             | 12-13 | 12-13 |  |
| Willowmore.....                       | 0800          | 14  | 12  | 11  | 8   | 6   | 5   | 6   | 7   | 11  | 11  | 14  | 15  | 120            | 5-9   | 5-9   |  |
| South-West Africa:                    |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |  |
| Gobabis.....                          | 0700          | 17  | 15  | 15  | 14  | 13  | 9   | 11  | 12  | 12  | 17  | 15  | 15  | 159            | 8     | 8     |  |
| Keetmanshoop.....                     | 0700          | 14  | 11  | 10  | 12  | 10  | 9   | 11  | 10  | 11  | 10  | 11  | 13  | 131            | 9-10  | 9-10  |  |
| Mariental.....                        | 0700          | 14  | 10  | 7   | 4   | 4   | 4   | 3   | 4   | 5   | 10  | 11  | 14  | 55             | 8     | 8     |  |
| Outjo.....                            | 0700          | 10  | 9   | 7   | 7   | 10  | 9   | 9   | 11  | 10  | 11  | 12  | 13  | 116            | 8     | 8     |  |
| Windhoek.....                         | 0700          | 7   | 7   | 8   | 8   | 11  | 10  | 11  | 9   | 8   | 6   | 6   | 8   | 99             | 9-10  | 9-10  |  |
| Botswana:                             |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |  |
| Francistown.....                      | 1400          | 13  | 10  | 13  | 15  | 20  | 20  | 16  | 16  | 11  | 6   | 9   | 11  | 159            | 6     | 6     |  |
| Gaborone.....                         | 1400          | 10  | 10  | 12  | 15  | 14  | 19  | 17  | 17  | 13  | 10  | 12  | 12  | 161            | 6-7   | 6-7   |  |
| Ghanzi.....                           | 1300          | 8   | 8   | 12  | 13  | 17  | 18  | 17  | 18  | 10  | 4   | 9   | 7   | 141            | 6     | 6     |  |
| Maun.....                             | 1400          | 10  | 10  | 11  | 8   | 13  | 15  | 15  | 16  | 8   | 4   | 5   | 8   | 125            | 9     | 9     |  |
| Shakawe.....                          | 1300          | 11  | 10  | 13  | 14  | 17  | 16  | 20  | 16  | 7   | 3   | 11  | 11  | 147            | 5     | 5     |  |
| Tsabong.....                          | 1300          | 6   | 5   | 10  | 12  | 14  | 15  | 17  | 16  | 10  | 8   | 9   | 5   | 128            | 6-7   | 6-7   |  |
| Tsane.....                            | 1300          | 7   | 7   | 11  | 16  | 17  | 17  | 17  | 17  | 10  | 9   | 10  | 8   | 145            | 6     | 6     |  |
| Republic of South Africa:             |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |  |
| Alexander Bay.....                    | 1300          | 3   | 4   | 5   | 8   | 12  | 13  | 12  | 10  | 6   | 4   | 4   | 3   | 83             | 12    | 12    |  |
| Beaufort West.....                    | 1400          | 9   | 10  | 11  | 10  | 11  | 9   | 9   | 9   | 11  | 12  | 11  | 12  | 122            | 11-12 | 11-12 |  |
| Bethlehem.....                        | 1400          | 15  | 13  | 16  | 14  | 11  | 10  | 15  | 12  | 12  | 13  | 13  | 15  | 159            | 10-11 | 10-11 |  |
| Calvinia.....                         | 1300          | 12  | 12  | 17  | 17  | 18  | 15  | 17  | 18  | 17  | 18  | 17  | 15  | 194            | 12    | 11-12 |  |
| Cape Agulhas.....                     | 1300          | 9   | 8   | 8   | 9   | 9   | 11  | 9   | 10  | 7   | 7   | 7   | 9   | 101            | 12    | 12    |  |
| Cape Columbine.....                   | 1300          | 7   | 9   | 10  | 13  | 13  | 11  | 14  | 11  | 9   | 9   | 7   | 6   | 115            | 12    | 12    |  |
| Cape Saint Lucia.....                 | 1400          | 9   | 8   | 9   | 9   | 10  | 10  | 8   | 8   | 6   | 8   | 8   | 10  | 103            | 11    | 10-11 |  |
| Cape Town/D.F. Malan.....             | 1300          | 7   | 5   | 11  | 11  | 11  | 8   | 9   | 11  | 11  | 10  | 7   | 7   | 111            | 11-12 | 11-12 |  |
| De Aar.....                           | 1400          | 12  | 13  | 16  | 15  | 15  | 15  | 15  | 16  | 14  | 15  | 13  | 13  | 187            | 10-11 | 10-11 |  |
| Durban/Louis Botha.....               | 1400          | 10  | 8   | 9   | 10  | 13  | 14  | 12  | 10  | 7   | 10  | 9   | 9   | 122            | 11-12 | 11-12 |  |
| East London.....                      | 1400          | 7   | 8   | 9   | 10  | 12  | 12  | 14  | 11  | 8   | 7   | 7   | 8   | 112            | 12    | 12    |  |
| Estcourt.....                         | 1400          | 12  | 10  | 13  | 10  | 8   | 8   | 12  | 13  | 13  | 14  | 12  | 12  | 139            | 11    | 11    |  |
| Johannesburg/Jan Smuts.....           | 1400          | 16  | 15  | 17  | 17  | 16  | 14  | 15  | 14  | 12  | 11  | 14  | 15  | 175            | 12    | 12    |  |
| Kimberley.....                        | 1400          | 8   | 10  | 13  | 16  | 17  | 17  | 13  | 12  | 12  | 10  | 10  | 8   | 146            | 12    | 12    |  |
| Kuruman.....                          | 1400          | 16  | 15  | 22  | 21  | 23  | 23  | 23  | 21  | 22  | 19  | 18  | 15  | 239            | 9-11  | 9-11  |  |
| Lydenburg.....                        | 1400          | 21  | 19  | 22  | 21  | 24  | 22  | 22  | 21  | 21  | 17  | 19  | 17  | 245            | 5-6   | 5-6   |  |
| Macuville.....                        | 1400          | 8   | 9   | 11  | 14  | 17  | 11  | 11  | 9   | 12  | 10  | 6   | 5   | 124            | 2-3   | 2-3   |  |
| Mafeking.....                         | 1400          | 14  | 14  | 16  | 17  | 17  | 18  | 18  | 17  | 14  | 10  | 14  | 15  | 185            | 9-10  | 9-10  |  |
| Marnitz.....                          | 1400          | 15  | 13  | 17  | 19  | 19  | 19  | 18  | 19  | 15  | 10  | 12  | 17  | 194            | 11-12 | 10-12 |  |
| Matroosberg.....                      | 1300          | 12  | 11  | 16  | 15  | 16  | 15  | 17  | 15  | 15  | 15  | 13  | 13  | 172            | 10-11 | 10-11 |  |
| Middelburg.....                       | 1400          | 13  | 13  | 13  | 14  | 14  | 11  | 11  | 11  | 12  | 12  | 13  | 13  | 149            | 11    | 10-11 |  |
| Okiep.....                            | 1300          | 15  | 17  | 21  | 22  | 22  | 19  | 18  | 20  | 21  | 22  | 21  | 19  | 240            | 12-13 | 11-13 |  |

FIGURE 54. DAYS WITH SURFACE WIND SPEED 4 TO 10 KNOTS, TEMPERATURE  $>32^{\circ}\text{F.}$  BUT  $<90^{\circ}\text{F.}$ , AND NO PRECIPITATION (Continued)

| COUNTRY AND STATION                   | HOUR<br>(LST) |     |     |     |     |     |     |     |     |     |     |     |     | DATA BASE INFO |       |       |
|---------------------------------------|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|-------|-------|
|                                       |               | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANN            | FOR   | CYR   |
| Republic of South Africa (Continued): |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |
| Phalaborwa.....                       | 1400          | 12  | 12  | 15  | 14  | 15  | 19  | 17  | 18  | 15  | 13  | 11  | 12  | 173            | 9-10  | 9-10  |
| Pietersburg.....                      | 1400          | 14  | 14  | 16  | 15  | 17  | 13  | 15  | 15  | 12  | 11  | 13  | 14  | 170            | 12    | 12    |
| Piet Retief.....                      | 1400          | 12  | 8   | 9   | 9   | 10  | 12  | 13  | 15  | 14  | 13  | 11  | 12  | 137            | 11-12 | 11-12 |
| Port Elizabeth.....                   | 1400          | 7   | 6   | 10  | 10  | 11  | 11  | 11  | 10  | 7   | 6   | 6   | 6   | 100            | 12    | 12    |
| Port Saint Johns.....                 | 1400          | 11  | 9   | 11  | 10  | 13  | 14  | 14  | 12  | 10  | 9   | 11  | 12  | 130            | 12    | 12    |
| Queenstown.....                       | 1400          | 14  | 12  | 12  | 12  | 13  | 12  | 12  | 12  | 12  | 12  | 13  | 14  | 150            | 9-11  | 9-11  |
| Sheeprun.....                         | 1400          | 15  | 15  | 15  | 15  | 15  | 12  | 11  | 17  | 18  | 19  | 15  | 17  | 186            | 5-6   | 5-6   |
| Uptington.....                        | 1300          | 5   | 5   | 9   | 11  | 11  | 10  | 10  | 11  | 11  | 11  | 8   | 6   | 109            | 12    | 11-12 |
| Walvis Bay.....                       | 1300          | 22  | 19  | 21  | 17  | 19  | 16  | 17  | 16  | 16  | 17  | 18  | 19  | 219            | 7-8   | 5-6   |
| Wepener.....                          | 1400          | 17  | 15  | 16  | 15  | 17  | 15  | 19  | 17  | 15  | 14  | 14  | 16  | 195            | 12-13 | 12-13 |
| Willowmore.....                       | 1400          | 13  | 12  | 17  | 14  | 16  | 14  | 14  | 14  | 14  | 14  | 15  | 12  | 170            | 8-9   | 7-9   |
| South-West Africa:                    |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |
| Gobabis.....                          | 1300          | 16  | 16  | 20  | 21  | 23  | 21  | 20  | 21  | 20  | 16  | 16  | 13  | 223            | 5     | 8     |
| Keetmanshoop.....                     | 1300          | 6   | 5   | 9   | 13  | 14  | 10  | 9   | 10  | 13  | 11  | 8   | 7   | 118            | 9-10  | 9-10  |
| Mariental.....                        | 1300          | 4   | 5   | 10  | 15  | 16  | 14  | 15  | 16  | 12  | 10  | 7   | 3   | 127            | 8     | 8     |
| Outjo.....                            | 1300          | 13  | 15  | 17  | 18  | 23  | 22  | 24  | 24  | 16  | 10  | 14  | 12  | 207            | 8     | 8     |
| Windhoek.....                         | 1300          | 14  | 14  | 18  | 17  | 17  | 15  | 15  | 14  | 14  | 14  | 11  | 12  | 176            | 9-10  | 9-10  |
| Botswana:                             |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |
| Francistown.....                      | 2000          | 11  | 11  | 10  | 8   | 12  | 9   | 13  | 11  | 13  | 13  | 11  | 11  | 133            | 6     | 6     |
| Gaborone.....                         | 2000          | 6   | 6   | 5   | 4   | 2   | 2   | 2   | 4   | 5   | 5   | 7   | 7   | 57             | 6-7   | 6-7   |
| Ghanzi.....                           | 1900          | 5   | 5   | 10  | 4   | 4   | 5   | 10  | 8   | 6   | 6   | 8   | 6   | 81             | 5-6   | 5-6   |
| Maun.....                             | 2000          | 2   | 2   | 2   | 2   | 2   | 2   | 3   | 4   | 4   | 4   | 4   | 4   | 37             | 9     | 5-9   |
| Shakawe.....                          | 1900          | 4   | 3   | 5   | 4   | 1   | 2   | 2   | 4   | 4   | 0   | 5   | 6   | 46             | 5     | 5     |
| Tsabong.....                          | 1900          | 9   | 8   | 8   | 3   | 4   | 3   | 4   | 7   | 7   | 9   | 9   | 9   | 79             | 6-7   | 6-7   |
| Tsane.....                            | 1900          | 11  | 8   | 8   | 7   | 5   | 5   | 4   | 9   | 7   | 10  | 11  | 14  | 100            | 6     | 6     |
| Republic of South Africa:             |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |
| Alexander Bay.....                    | 1900          | 11  | 13  | 13  | 12  | 13  | 9   | 12  | 12  | 12  | 13  | 13  | 12  | 145            | 10-11 | 10-11 |
| Beaufort West.....                    | 2000          | 10  | 11  | 14  | 15  | 14  | 11  | 12  | 15  | 13  | 14  | 11  | 10  | 147            | 11-12 | 10-12 |
| Bethlehem.....                        | 2000          | 8   | 6   | 8   | 7   | 5   | 3   | 5   | 5   | 5   | 7   | 7   | 8   | 73             | 10-11 | 10-11 |
| Calvinia.....                         | 1900          | 21  | 17  | 13  | 7   | 7   | 7   | 8   | 9   | 8   | 12  | 15  | 20  | 144            | 11-12 | 10-12 |
| Cape Agulhas.....                     | 1900          | 11  | 9   | 13  | 11  | 12  | 11  | 12  | 10  | 10  | 10  | 10  | 10  | 129            | 12    | 11-12 |
| Cape Columbine.....                   | 1900          | 7   | 7   | 10  | 10  | 13  | 13  | 14  | 11  | 10  | 9   | 7   | 6   | 114            | 12    | 12    |
| Cape Saint Lucia.....                 | 2000          | 8   | 8   | 9   | 9   | 10  | 10  | 7   | 8   | 8   | 8   | 8   | 10  | 102            | 11    | 10-11 |
| Cape Town/D.F. Malan.....             | 1900          | 10  | 10  | 11  | 10  | 10  | 10  | 8   | 10  | 11  | 12  | 10  | 10  | 121            | 11-12 | 11-12 |
| De Aar.....                           | 2000          | 16  | 15  | 16  | 13  | 11  | 8   | 10  | 13  | 17  | 17  | 17  | 16  | 170            | 10-11 | 10-11 |
| Durban/Louis Botha.....               | 2000          | 8   | 10  | 8   | 7   | 6   | 5   | 7   | 6   | 8   | 8   | 8   | 8   | 89             | 11-12 | 11-12 |
| East London.....                      | 2000          | 10  | 10  | 11  | 12  | 16  | 17  | 17  | 15  | 13  | 9   | 9   | 11  | 152            | 11-12 | 10-12 |
| Katcourt.....                         | 2000          | 9   | 7   | 8   | 7   | 4   | 4   | 5   | 5   | 7   | 9   | 10  | 11  | 85             | 11    | 11    |
| Johannesburg/Jan Smuts.....           | 2000          | 10  | 7   | 12  | 11  | 16  | 18  | 18  | 19  | 17  | 14  | 11  | 10  | 162            | 12    | 12    |
| Kimberley.....                        | 2000          | 13  | 13  | 10  | 15  | 16  | 18  | 19  | 18  | 18  | 15  | 13  | 13  | 180            | 12    | 12    |
| Kuruman.....                          | 2000          | 12  | 7   | 8   | 5   | 7   | 8   | 9   | 9   | 9   | 11  | 11  | 12  | 108            | 9-11  | 9-11  |
| Lydenburg.....                        | 2000          | 12  | 11  | 14  | 7   | 4   | 4   | 6   | 6   | 11  | 12  | 11  | 12  | 109            | 5-6   | 5-6   |
| Macville.....                         | 2000          | 10  | 7   | 8   | 5   | 2   | 2   | 1   | 3   | 5   | 12  | 9   | 11  | 73             | 2-3   | 2-3   |
| Mafeking.....                         | 2000          | 10  | 9   | 8   | 9   | 10  | 9   | 12  | 11  | 12  | 12  | 11  | 14  | 129            | 9-10  | 9-10  |
| Mamita.....                           | 2000          | 11  | 9   | 10  | 8   | 6   | 5   | 6   | 9   | 11  | 13  | 12  | 11  | 111            | 11-12 | 10-12 |
| Matroosberg.....                      | 1900          | 12  | 13  | 17  | 15  | 12  | 11  | 13  | 12  | 15  | 15  | 17  | 13  | 167            | 10-11 | 10-11 |
| Middelburg.....                       | 2000          | 16  | 16  | 14  | 12  | 15  | 15  | 16  | 17  | 15  | 17  | 15  | 16  | 184            | 10-11 | 10-11 |
| Okiep.....                            | 1900          | 23  | 22  | 24  | 17  | 14  | 13  | 14  | 15  | 17  | 23  | 23  | 23  | 229            | 12-13 | 11-13 |
| Phalaborwa.....                       | 2000          | 13  | 10  | 11  | 12  | 13  | 13  | 13  | 14  | 12  | 14  | 11  | 11  | 146            | 9-10  | 9-10  |
| Pietersburg.....                      | 2000          | 18  | 14  | 19  | 15  | 16  | 13  | 15  | 17  | 18  | 16  | 15  | 14  | 194            | 12    | 12    |
| Piet Retief.....                      | 2000          | 7   | 5   | 5   | 3   | 3   | 3   | 5   | 5   | 8   | 6   | 7   | 7   | 64             | 11-12 | 10-11 |
| Port Elizabeth.....                   | 2000          | 11  | 9   | 9   | 9   | 9   | 10  | 10  | 9   | 8   | 10  | 9   | 11  | 113            | 12    | 11-12 |
| Port Saint Johns.....                 | 2000          | 9   | 9   | 10  | 12  | 16  | 17  | 14  | 15  | 10  | 10  | 10  | 11  | 142            | 12    | 11-12 |
| Queenstown.....                       | 2000          | 15  | 13  | 11  | 8   | 6   | 6   | 6   | 7   | 10  | 14  | 15  | 16  | 126            | 8-9   | 8-9   |
| Sheeprun.....                         | 2000          | 10  | 8   | 7   | 4   | 3   | 3   | 3   | 7   | 8   | 8   | 10  | 11  | 84             | 5-6   | 5-6   |
| Uptington.....                        | 1900          | 7   | 9   | 12  | 12  | 13  | 13  | 16  | 16  | 13  | 16  | 13  | 9   | 147            | 12    | 11-12 |
| Wepener.....                          | 2000          | 10  | 7   | 7   | 5   | 5   | 3   | 5   | 6   | 8   | 8   | 8   | 8   | 80             | 12-13 | 12-13 |
| Willowmore.....                       | 2000          | 18  | 17  | 16  | 11  | 7   | 5   | 7   | 9   | 12  | 14  | 17  | 17  | 150            | 8-9   | 7-9   |
| South-West Africa:                    |               |     |     |     |     |     |     |     |     |     |     |     |     |                |       |       |
| Gobabis.....                          | 1900          | 16  | 14  | 15  | 15  | 14  | 16  | 16  | 15  | 15  | 15  | 13  | 13  | 181            | 8     | 8     |
| Keetmanshoop.....                     | 1900          | 5   | 5   | 13  | 17  | 21  | 18  | 19  | 18  | 16  | 12  | 8   | 4   | 159            | 9-10  | 9-10  |
| Mariental.....                        | 1900          | 8   | 8   | 10  | 9   | 4   | 6   | 7   | 7   | 10  | 12  | 11  | 8   | 99             | 8     | 8     |
| Outjo.....                            | 1900          | 14  | 10  | 9   | 9   | 8   | 10  | 8   | 9   | 11  | 16  | 14  | 15  | 132            | 8     | 8     |
| Windhoek.....                         | 1900          | 10  | 10  | 9   | 8   | 7   | 8   | 7   | 8   | 10  | 17  | 11  | 14  | 117            | 8     | 8     |

## E. Bibliography

Summaries of climatological data, prepared from discrete 6-hourly observations in nearly all cases, for individual stations in South Africa were furnished by the Environmental Technical Applications Center (ETAC), Air Weather Service. All tabular data by specified hours and all surface wind, upper-air wind, and upper-air temperature data were taken from these machine summaries. They also provided some means, extremes, and summary-of-the-day data. The remainder of the tabular data for temperature, precipitation, and thunderstorms were taken from *Sources 13, 15, and 17*. *Sources 1 through 12 and 14* provided background information on the climate of South Africa. *Source 18* provided rainfall maps, and *Source 16* provided synoptic maps indicating the characteristic weather conditions affecting South Africa during the different seasons.

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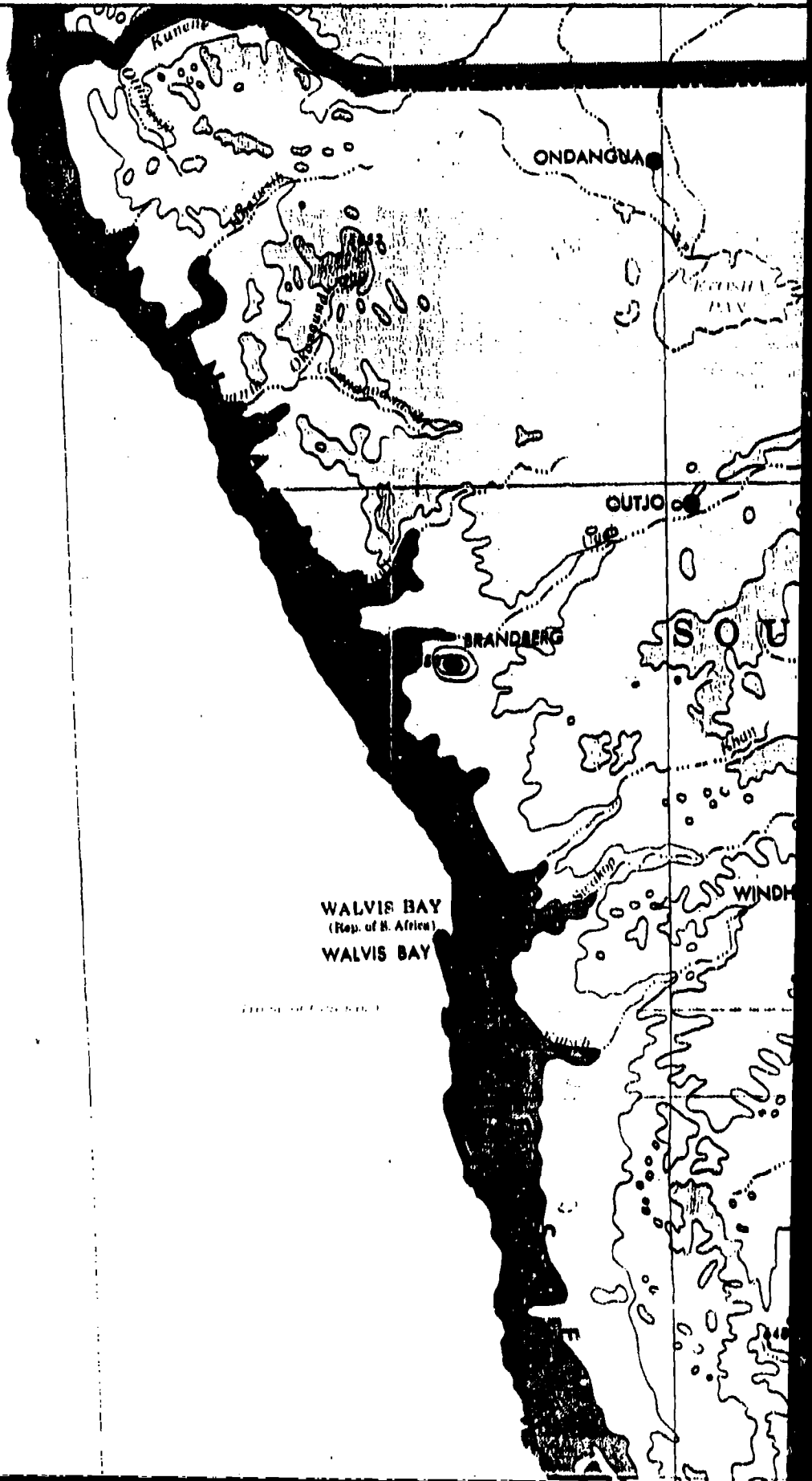
# LIST OF STATIONS

| COUNTRY AND STATION              | COORDINATES* |       | ELEVATION | COUNTRY AND STATION                     | COORDINATES* |       | ELEVATION |
|----------------------------------|--------------|-------|-----------|---|--------------|-------|-----------|
|                                  | 'S.          | 'E.   | Feet      |   | 'S.          | 'E.   | Feet      |
| <b>Botswana:</b>                 |              |       |           | <b>Republic of South Africa (Con.):</b> |              |       |           |
| Francistown.....                 | 21 18        | 27 30 | 3,284     | Lydenburg.....                          | 28 04        | 30 28 | 4,721     |
| Gaborone.....                    | 24 40        | 25 55 | 3,225     | Masoville.....                          | 22 18        | 29 54 | 1,713     |
| Ghanzi.....                      | 21 42        | 21 39 | 3,711     | Mafeking.....                           | 28 51        | 25 58 | 4,200     |
| Kasane.....                      | 17 49        | 25 09 | 3,002     | Mamits.....                             | 23 10        | 28 13 | 3,058     |
| Maun.....                        | 19 59        | 23 32 | 2,953     | Matroosberg.....                        | 33 26        | 19 49 | 3,143     |
| Serowe.....                      | 22 23        | 26 43 | 3,311     | Middelburg.....                         | 31 29        | 28 02 | 4,167     |
| Shakawe.....                     | 18 22        | 21 51 | 3,353     | Newcastle.....                          | 27 45        | 29 55 | 3,924     |
| Tsabong.....                     | 26 03        | 22 27 | 3,150     | Okiep.....                              | 29 35        | 17 52 | 3,012     |
| Tsane.....                       | 24 01        | 21 53 | 3,609     | Phalaborwa.....                         | 23 55        | 31 09 | 1,421     |
| <b>Lesotho:</b>                  |              |       |           | Pietersburg.....                        | 23 52        | 29 27 | 4,035     |
| Maseru.....                      | 29 19        | 27 29 | 5,003     | Piet Retief.....                        | 27 00        | 30 48 | 4,101     |
| Mokhotlong.....                  | 29 17        | 29 05 | 7,792     | Port Elizabeth.....                     | 33 59        | 25 36 | 197       |
| Quthaa Nek.....                  | 30 07        | 24 42 | 6,470     | Port Saint Johns.....                   | 31 38        | 29 33 | 154       |
| <b>Republic of South Africa:</b> |              |       |           | Pretoria.....                           | 28 45        | 28 14 | 4,491     |
| Alexander Bay.....               | 28 34        | 16 32 | 69        | Queenstown.....                         | 31 53        | 26 53 | 3,553     |
| Beaufort West.....               | 32 21        | 22 35 | 2,812     | Sheepun.....                            | 30 59        | 28 23 | 3,980     |
| Bethlehem.....                   | 28 10        | 28 18 | 5,351     | Somerset East.....                      | 32 43        | 25 35 | 2,513     |
| Bloemfontein.....                | 29 07        | 26 11 | 4,665     | Standerton.....                         | 26 57        | 29 15 | 5,036     |
| Calvinia.....                    | 31 28        | 19 46 | 3,215     | Uptington.....                          | 28 26        | 31 16 | 2,671     |
| Cape Agulhas.....                | 34 50        | 20 01 | 30        | Vanwykavlei.....                        | 30 21        | 31 49 | 3,146     |
| Cape Columbine.....              | 32 50        | 17 51 | 197       | Walvis Bay.....                         | 22 53        | 14 26 | 23        |
| Cape Saint Lucia.....            | 28 30        | 32 24 | 351       | Wepener.....                            | 29 44        | 27 02 | 4,685     |
| Cape Town/D.F. Malan.....        | 33 53        | 18 36 | 144       | Willowmore.....                         | 33 17        | 23 30 | 2,723     |
| De Aar.....                      | 30 39        | 24 01 | 4,072     | <b>South-West Africa:</b>               |              |       |           |
| Durban/Louis Botha.....          | 29 58        | 30 57 | 26        | Gobabis.....                            | 22 28        | 18 58 | 4,731     |
| East London.....                 | 33 02        | 27 50 | 410       | Keetmanshoop.....                       | 26 34        | 18 07 | 3,497     |
| Katcourt.....                    | 29 01        | 29 52 | 3,875     | Mariental.....                          | 24 37        | 17 55 | 3,599     |
| George.....                      | 33 59        | 22 25 | 725       | Ondangua.....                           | 17 56        | 18 59 | 3,593     |
| Goodhouse.....                   | 28 54        | 18 14 | 666       | Outjo.....                              | 20 07        | 16 09 | 4,150     |
| Johannesburg/Jan Smuts.....      | 26 05        | 28 14 | 5,558     | Tsumeb.....                             | 19 14        | 17 43 | 4,301     |
| Jonkershoek.....                 | 34 00        | 19 01 | 3,999     | Windhoek.....                           | 22 34        | 17 06 | 5,669     |
| Kimberley.....                   | 28 48        | 24 46 | 3,030     | <b>Swaziland:</b>                       |              |       |           |
| Kuruman.....                     | 27 28        | 23 26 | 4,305     | Mbabane.....                            | 26 19        | 31 08 | 3,766     |
| Louis Trichardt.....             | 23 03        | 29 54 | 3,153     | Stegi.....                              | 26 27        | 31 57 | 2,142     |

\*Coordinates give locations of weather stations and do not correspond necessarily to those for populated places.

①

SOUTH  
ATLANTIC  
OCEAN



WALVIS BAY  
(Rep. of N. Africa)  
WALVIS BAY

Scale of 1:100,000

2  
ANGOLA  
(Port.)

ZAMBIA

Okavango Omuramba

Okavango

TSUMEB

Omaraka Omuramba

SHAKAWE

OKOVANGGO SWAMP

MAUN

TH. WEST AFRICA  
(International Territory)

LAKE NGAMI

GHANZI

Epukiro

GOBABIS

BOTSWANA

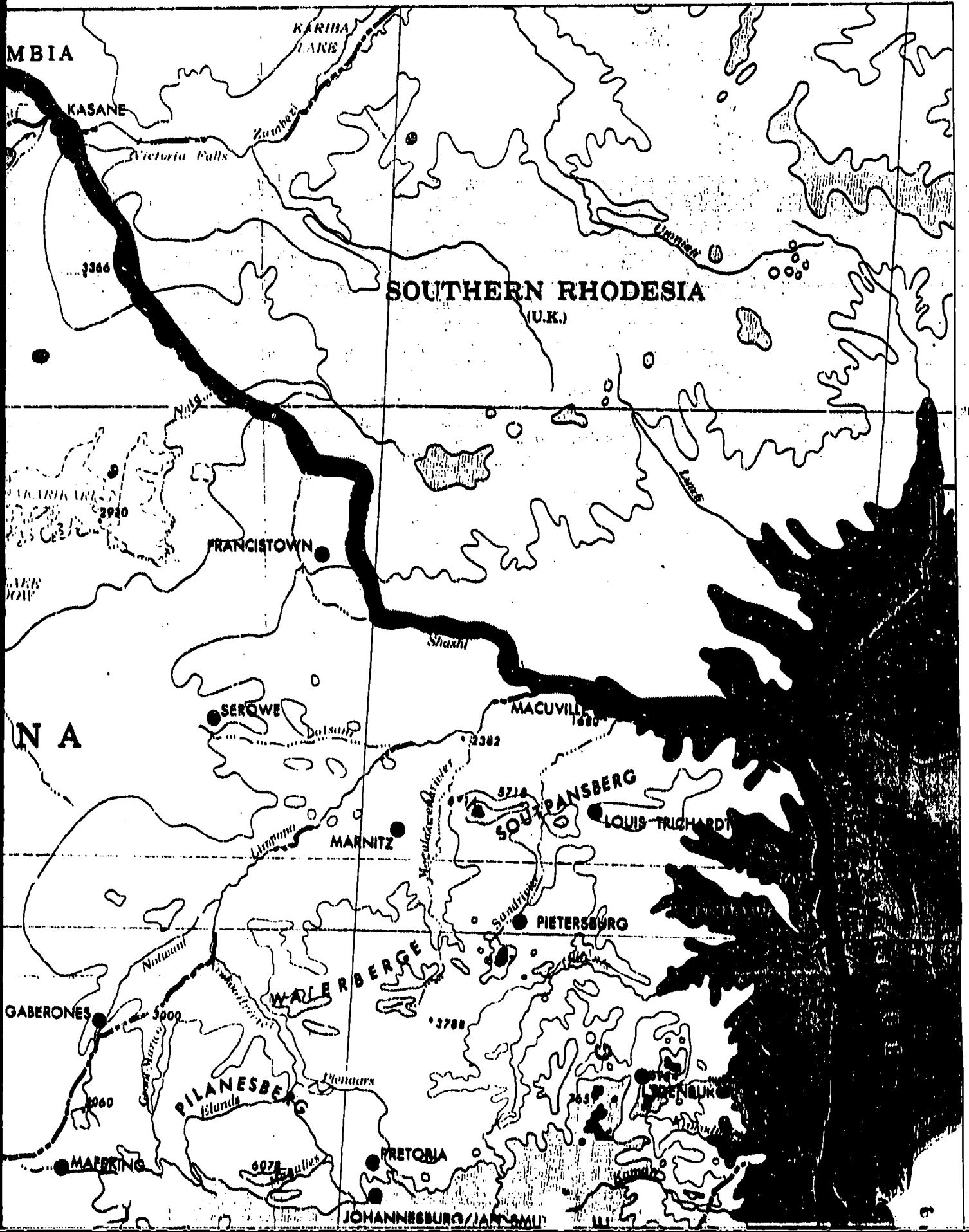
KALAHARI

TSANE

MARIENTAL

TSABONG

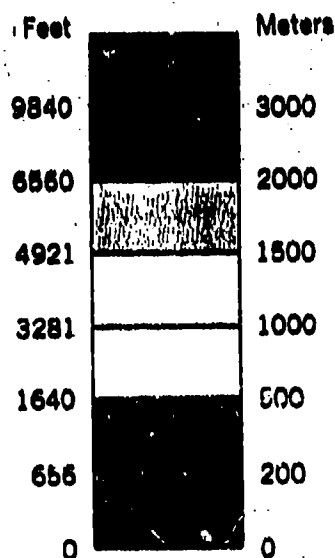




# SOUTH AFRICA STATION LOCATIONS

## ● METEOROLOGICAL STATION

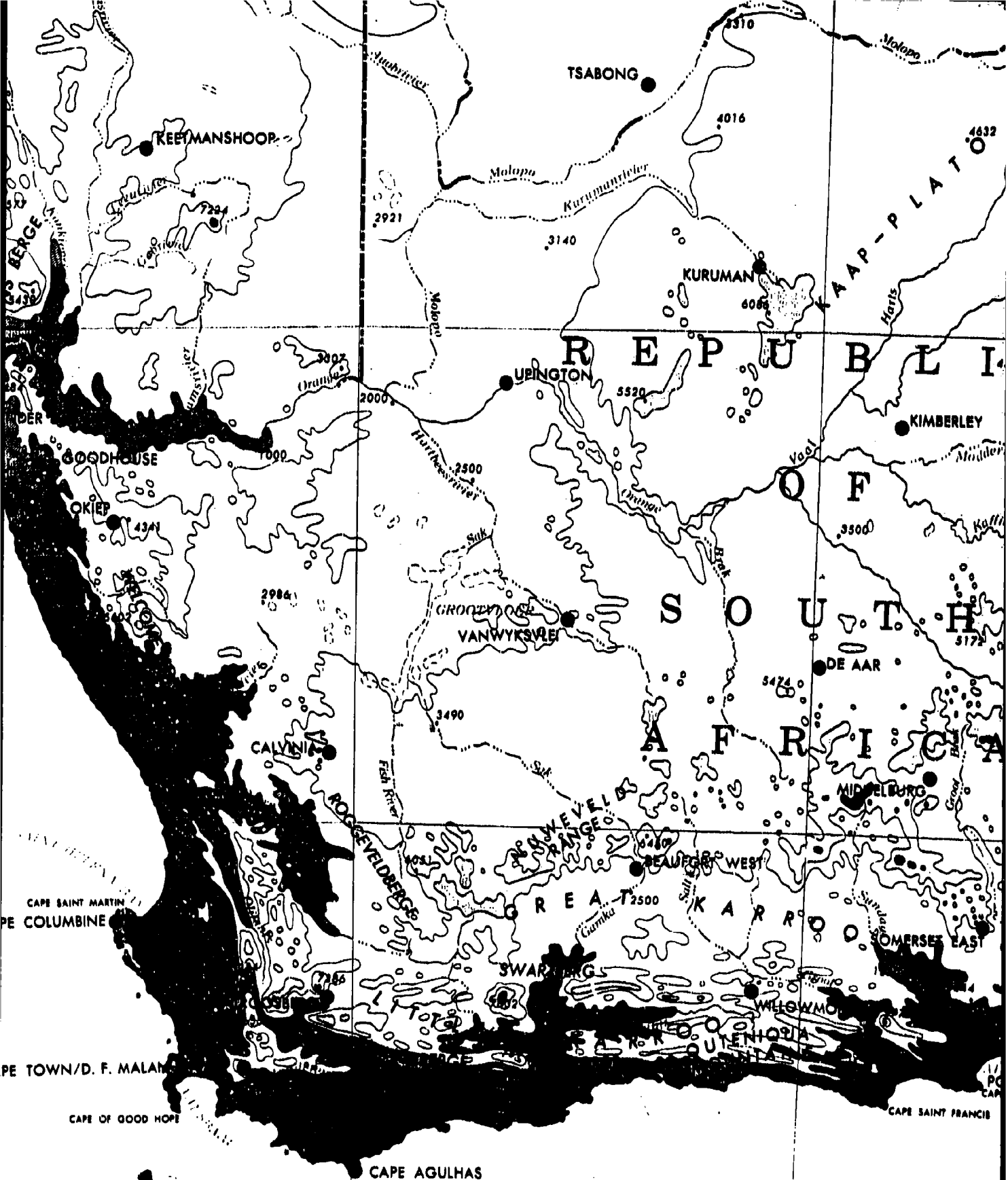
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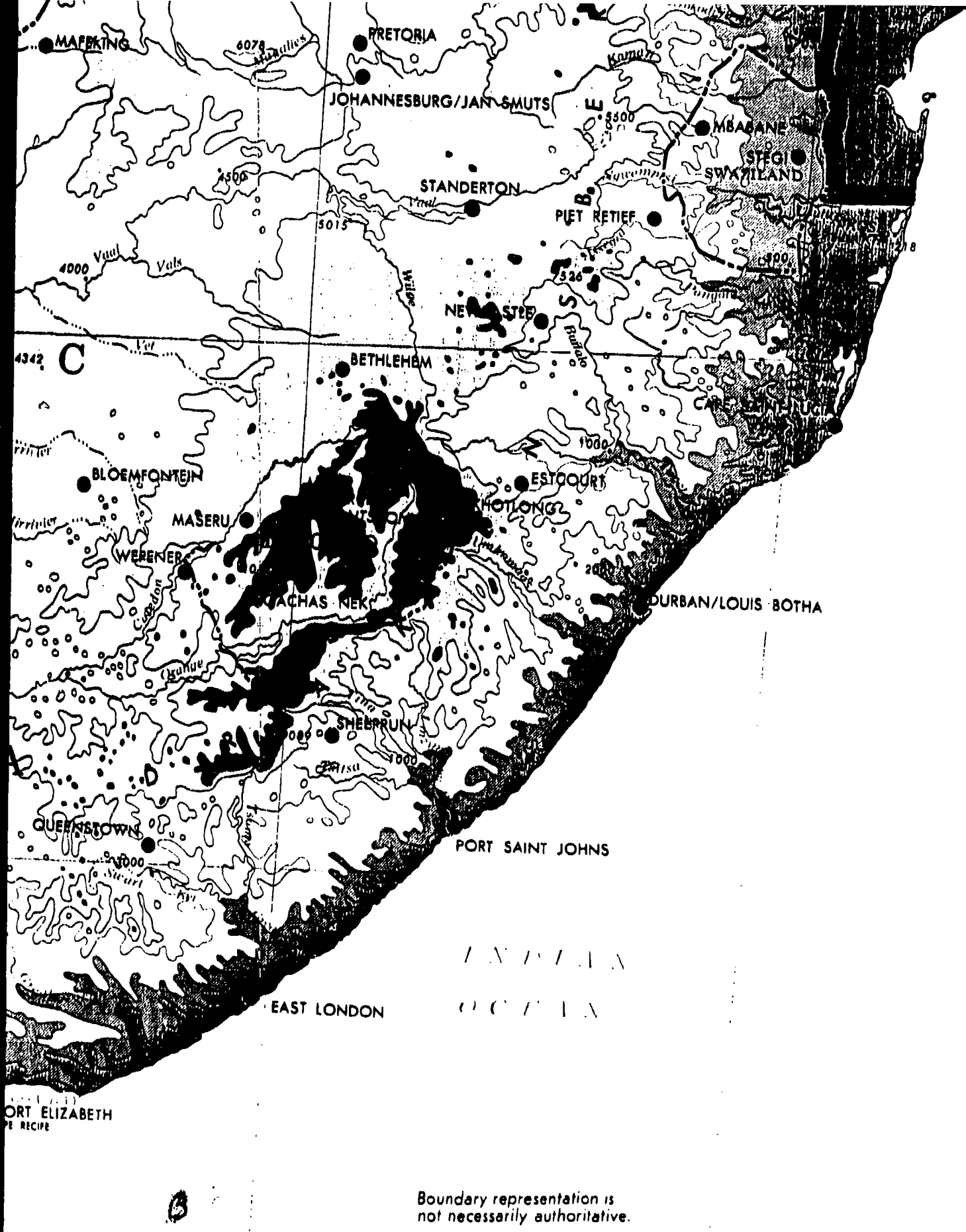


- |                        |                     |
|------------------------|---------------------|
| NIS boundary           | Lake or reservoir   |
| International boundary | Intermittent lake   |
| Spot elevation (feet)  | Pan, viol, or vloer |
| Perennial stream       | Marsh or swamp      |
| Intermittent stream    |                     |



(4)





Station Locations Figure 55



## Declassification Instructions For This National Intelligence Survey Volume

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Country: **South Africa**

Report Title: **Weather and Climate**

NIS Series Number: **61**

Publication Date: **01-Jan-72**

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Total Pages: **100**

Section Number: **23**

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